



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 20, 2023 – 06:41 AM EDT

PDB ID : 5K8D  
Title : Crystal structure of rFVIII<sup>Fc</sup>  
Authors : Leksa, N.; Quan, C.  
Deposited on : 2016-05-29  
Resolution : 4.19 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35.1  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.35.1

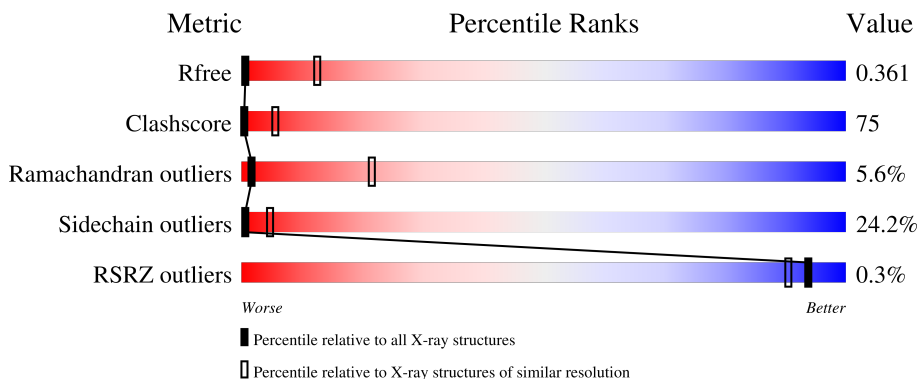
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 4.19 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1005 (4.62-3.78)
Clashscore	141614	1044 (4.60-3.80)
Ramachandran outliers	138981	1000 (4.60-3.80)
Sidechain outliers	138945	1007 (4.62-3.78)
RSRZ outliers	127900	1063 (4.70-3.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	740	
2	B	865	
3	C	4	
4	D	2	
5	E	7	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

<b>Mol</b>	<b>Type</b>	<b>Chain</b>	<b>Res</b>	<b>Chirality</b>	<b>Geometry</b>	<b>Clashes</b>	<b>Electron density</b>
3	BMA	C	3	-	-	X	-
4	NAG	D	1	-	-	-	X
4	NAG	D	2	-	-	-	X

## 2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 10138 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Coagulation factor VIII.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	611	4937	3190	824	898	25	0	0	0

- Molecule 2 is a protein called Coagulation factor VIII,Ig gamma-1 chain C region.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	619	5035	3234	862	908	31	0	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	2332	TYR	-	linker	UNP P00451

- Molecule 3 is an oligosaccharide called alpha-D-mannopyranose-(1-6)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



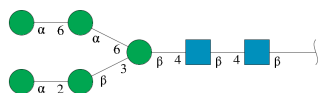
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
3	C	4	50	28	2	20	0	0	0

- Molecule 4 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
4	D	2	28	16	2	10	0	0	0

- Molecule 5 is an oligosaccharide called alpha-D-mannopyranose-(1-2)-beta-D-mannopyranose-(1-3)-[alpha-D-mannopyranose-(1-6)-alpha-D-mannopyranose-(1-6)]beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
5	E	7	83	46	2	35	0	0	0

- Molecule 6 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	3	Total	Ca	0	0
			3	3		

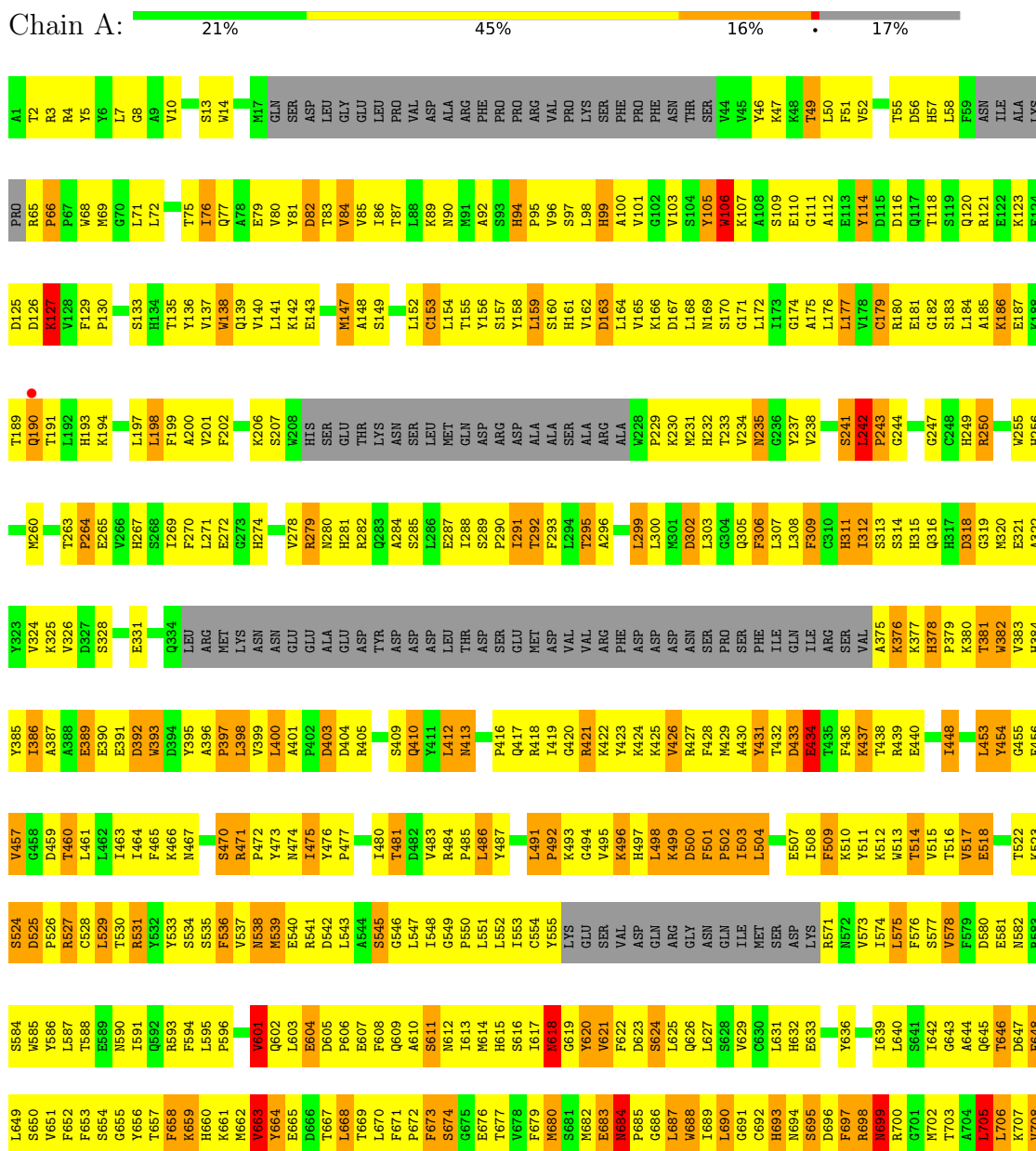
- Molecule 7 is COPPER (II) ION (three-letter code: CU) (formula: Cu).

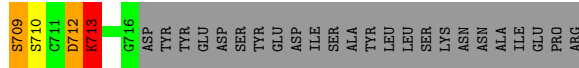
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	1	Total	Cu	0	0
			1	1		
7	B	1	Total	Cu	0	0
			1	1		

### 3 Residue-property plots

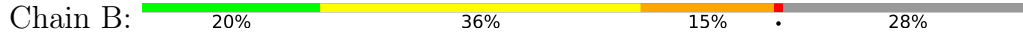
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: Coagulation factor VIII





● Molecule 2: Coagulation factor VIII,Ig gamma-1 chain C region



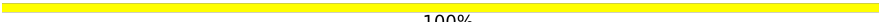
K1694	L1759	H1822	D1884	M1947	F2014	L2080	Y2156	R2221	V2294	LYS	LEU	THR	THR	SER
L1695	G1760	M1823	E1885	G1948	L2015	L2081	S2157	Q2222	M2295	PRO	THR	THR	CYS	VAL
A1824	P1761	A1824	T1886	S1949	Y2016	H2082	I2158	R2226	S2296	LYS	VAL	LEU	LEU	MET
H1697	Y1762	P1825	K1887	N1950	Y2017	G2083	R2159	F2226	L2297	ASP	VAL	LEU	LEU	HIS
F1698	I1763	K1826	S1888	E1951	S2160	L2084	T2161	W2229	D2298	THR	GLN	GLN	GLN	ALA
I1700	R1764	K1827	W1889	N1952	C2021	Q2087	L2162	L2230	P2299	LEU	ASP	ASP	ASP	LEU
E1704	E1766	E1829	Y1890	I1953	Q2092	G2088	R2163	Q2231	R2300	THR	THR	THR	THR	HIS
R1705	E1767	F1830	F1892	S1955	T2023	G2089	M2164	Q2232	L2301	LEU	LEU	LEU	LEU	ASN
L1706	E1768	D1831	E1893	H1984	P2024	A2089	R2165	D2233	R2302	SER	LEU	LEU	LEU	ASN
W1707	D1769	C1832	E1894	F1958	L2025	R2090	E2166	F2234	R2303	THR	ASP	ASP	ASP	HIS
D1708	N1771	K1833	A1834	S1959	M2027	Q2091	M2167	Q2235	L2304	THR	ILE	ILE	ILE	THR
Y1709	M1772	W1835	A1834	S1959	Q2092	S2095	G2168	K2236	L2305	GLU	GLU	GLU	GLU	THR
G1710	T1773	A1836	Y1894	V1962	S2089	L2096	C2169	T2237	R2306	VAL	VAL	VAL	VAL	LYS
M1711	T1774	Y1837	A1836	F1963	G2030	D2170	D2171	M2238	R2307	THR	THR	THR	THR	SER
S1712	F1775	F1838	ALA	R1965	H2031	L2098	L2171	G2242	H2308	CYS	CYS	CYS	CYS	LEU
SER	R1776	PRO	PRO	K1966	I2032	F2101	S2175	M2243	H2309	VAL	VAL	VAL	VAL	LEU
PRO	W1777	D1840	CYS	K1967	D2034	L2102	M2176	T2244	G2311	VAL	VAL	VAL	VAL	SER
TYR	Q1778	V1841	ASN	E1968	F2085	I2103	P2177	T2245	W2313	ASN	SER	SER	SER	SER
LEU	A1779	D1842	ILE	E1969	I2036	M2104	L2103	Q2246	W2314	VAL	VAL	VAL	VAL	PRO
LEU	S1780	E1843	GLN	K1972	T2037	Y2105	G2179	G2247	H2315	ALA	ALA	ALA	ALA	LEU
SER	R1781	E1844	LEU	M1907	T2038	S2106	M2180	W2248	G2315	HIS	HIS	HIS	HIS	GLU
LYS	P1782	K1845	ARG	E1908	A2039	L2107	E2181	K2249	R2320	GLU	GLU	GLU	GLU	PRO
ASN	A1783	D1846	ASN	D1909	S2040	G2041	S2182	L2252	E2322	ALA	ASP	ASP	ASP	ASN
ASN	S1784	S1849	ARG	I1912	G2042	K2111	K2183	L2253	E2323	PRO	PRO	PRO	PRO	TYR
ALA	F1785	G1850	ALA	F1912	Q2043	W2112	A2184	M2255	V2323	ILE	ILE	ILE	ILE	LYS
GLN	Y1786	G1851	GLN	K1913	R2052	Q2113	I2185	L2256	L2324	VAL	VAL	VAL	VAL	THR
GLY	S1787	L1851	SER	E1914	G2044	T2114	S2186	F2259	G2325	THR	THR	THR	THR	THR
PRO	S1788	I1852	GLY	M1915	Q2045	Y2115	D2187	E2260	C2326	THR	THR	THR	THR	THR
GLY	L1789	G1853	GLY	Y1916	W2046	R2116	A2188	L2261	Q2326	ILE	ILE	ILE	ILE	PRO
S1726	I1790	P1854	P1854	R1917	A2047	G2117	Q2189	I2262	Q2329	SER	SER	SER	SER	VAL
F1730	S1791	L1855	L1855	F1918	P2048	T2120	I2190	L2263	D2330	LEU	LEU	LEU	LEU	LEU
K1731	Y1792	L1856	L1856	H1919	R2049	R2123	S2193	S2263	D2331	ALA	ALA	ALA	ALA	ASP
K1732	E1793	V1857	V1857	H1919	K2051	L2123	Y2195	S2264	L2331	LYS	LYS	LYS	LYS	SER
V1733	E1794	C1858	C1858	E1984	A2051	L2123	S2194	S2265	Y2332	GLY	GLY	GLY	GLY	ASP
F1735	Q1795	H1859	H1859	V1985	R2052	R2129	Y2196	D2267	ASP	VAL	VAL	VAL	VAL	THR
F1736	Q1796	T1860	T1860	E1987	L2053	V2130	F2196	G2268	THR	VAL	VAL	VAL	VAL	THR
Q1737	R1797	M1861	M1861	M1988	H2054	D2131	T2197	H2269	THR	VAL	VAL	VAL	VAL	THR
E1737	Q1798	L1862	L1862	L1989	Y2055	S2132	M2198	Q2270	THR	ASN	ASN	ASN	ASN	THR
F1738	G1799	L1863	L1863	L1992	H2055	S2133	F2200	W2271	PRO	ASN	ASN	ASN	ASN	THR
T1739	L1800	M1864	M1864	D1927	S2058	S2133	F2200	W2271	PRO	ALA	ALA	ALA	ALA	THR
D1740	A1800	P1865	P1865	T1928	L2059	G2134	T2202	L2272	PRO	LYS	LYS	LYS	LYS	THR
G1741	K1804	A1866	A1866	L1929	N2060	L2135	W2202	L2273	CYS	THR	THR	THR	THR	THR
S1742	V1807	H1867	H1867	P1930	N2061	L2135	W2203	F2274	PRO	LYS	LYS	LYS	LYS	THR
F1743	K1808	G1868	G1868	G1931	A2061	T2139	S2204	F2275	PRO	ALA	ALA	ALA	ALA	THR
T1744	P1809	R1869	R1869	L1932	W2062	F2140	P2205	Q2276	PRO	ARG	ARG	ARG	ARG	THR
P1745	M1810	Q1870	Q1870	M1934	T2064	T2064	P2206	K2279	PRO	GLU	GLU	GLU	GLU	THR
L1747	E1811	V1871	V1871	A1935	K2065	L2144	S2207	Y2280	LEU	GLU	GLU	GLU	GLU	THR
Y1748	T1812	T1872	T1872	Q1936	K2065	L2144	K2207	V2281	LEU	GLN	GLN	GLN	GLN	THR
R1749	Q1874	Q1874	Q1874	D1937	F2068	A2146	L2210	K2281	LEU	ARG	ARG	ARG	ARG	THR
G1750	L1813	L1813	L1813	Q1938	S2069	R2147	H2211	W2282	GLY	ASP	ASP	ASP	ASP	THR
E1751	Y1814	E1875	E1875	R1939	W2070	Y2148	L2212	F2283	GLY	ASP	ASP	ASP	ASP	THR
L1752	F1816	F1876	F1876	R1940	I2071	L2149	Q2213	W2284	THR	THR	THR	THR	THR	THR
H1755	W1817	A1877	A1877	R1941	K2072	R2150	G2214	N2286	THR	THR	THR	THR	THR	THR
G1756	W1817	W1817	W1817	W1942	H2072	L2151	R2215	W2286	THR	THR	THR	THR	THR	THR
G1757	K1818	K1818	K1818	Y1943	L2075	H2152	S2216	F2290	LEU	VAL	VAL	VAL	VAL	THR
L1758	V1819	V1819	V1819	L1944	L2076	F2153	N2217	T2291	PHE	VAL	VAL	VAL	VAL	THR
	H1821	F1883	F1883	L1944	M2079	T2012	R2220	W2293	PRO	SER	SER	SER	SER	THR
				S1946						VAL	VAL	VAL	VAL	CYS

- Molecule 3: alpha-D-mannopyranose-(1-6)-beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain C:  25% 75%

MAG1  
MAG2  
BMA3  
MAN4

- Molecule 4: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain D:  100%

MAG1  
MAG2

- Molecule 5: alpha-D-mannopyranose-(1-2)-beta-D-mannopyranose-(1-3)-[alpha-D-mannopyranose-(1-6)-alpha-D-mannopyranose-(1-6)]beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain E:  14% 43% 43%

MAG1  
MAG2  
BMA3  
BMA4  
MAN5  
MAN6  
MAN7



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	136.29Å 136.29Å 365.10Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	37.60 – 4.19 37.60 – 4.19	Depositor EDS
% Data completeness (in resolution range)	98.8 (37.60-4.19) 99.0 (37.60-4.19)	Depositor EDS
$R_{merge}$	0.17	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.46 (at 4.13Å)	Xtrriage
Refinement program	REFMAC 5.8.0155	Depositor
R, $R_{free}$	0.298 , 0.362 0.298 , 0.361	Depositor DCC
$R_{free}$ test set	1309 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	126.3	Xtrriage
Anisotropy	0.059	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.19 , 131.3	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.53$ , $\langle L^2 \rangle = 0.37$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.84	EDS
Total number of atoms	10138	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	205.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.33% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: NAG, MAN, BMA, CA, CU

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.86	15/5077 (0.3%)	0.90	4/6890 (0.1%)
2	B	0.80	21/5178 (0.4%)	0.86	1/7011 (0.0%)
All	All	0.83	36/10255 (0.4%)	0.88	5/13901 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
2	B	0	2
All	All	0	4

All (36) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	434	GLU	CD-OE1	14.90	1.42	1.25
1	A	389	GLU	CD-OE2	14.10	1.41	1.25
1	A	697	PHE	CG-CD2	13.56	1.59	1.38
1	A	697	PHE	CG-CD1	11.83	1.56	1.38
1	A	697	PHE	CE1-CZ	10.48	1.57	1.37
2	B	1838	PHE	CG-CD1	9.46	1.52	1.38
1	A	434	GLU	CD-OE2	9.38	1.35	1.25
2	B	1983	PHE	CG-CD1	9.21	1.52	1.38
1	A	434	GLU	CG-CD	9.06	1.65	1.51
1	A	697	PHE	CE2-CZ	8.83	1.54	1.37
2	B	1983	PHE	CG-CD2	8.79	1.51	1.38
2	B	1897	ARG	NE-CZ	8.15	1.43	1.33
2	B	1742	SER	CB-OG	8.09	1.52	1.42
2	B	2055	TYR	CE1-CZ	7.83	1.48	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	712	ASP	CG-OD2	7.58	1.42	1.25
2	B	1838	PHE	CG-CD2	7.37	1.49	1.38
2	B	1743	PHE	CG-CD1	7.34	1.49	1.38
2	B	1983	PHE	CE2-CZ	7.33	1.51	1.37
1	A	712	ASP	CG-OD1	7.30	1.42	1.25
2	B	1983	PHE	CE1-CZ	7.30	1.51	1.37
2	B	1745	GLN	CG-CD	7.25	1.67	1.51
1	A	389	GLU	CG-CD	7.24	1.62	1.51
1	A	389	GLU	CD-OE1	6.81	1.33	1.25
2	B	1838	PHE	CE2-CZ	6.40	1.49	1.37
1	A	190	GLN	CG-CD	6.35	1.65	1.51
1	A	618	ASN	C-O	6.15	1.35	1.23
2	B	1838	PHE	CE1-CZ	6.05	1.48	1.37
2	B	2055	TYR	CG-CD2	6.04	1.47	1.39
2	B	1946	SER	CB-OG	5.94	1.50	1.42
2	B	1743	PHE	CG-CD2	5.89	1.47	1.38
2	B	2058	SER	CB-OG	5.71	1.49	1.42
2	B	1897	ARG	CZ-NH2	5.51	1.40	1.33
2	B	2330	ASP	CG-OD1	5.27	1.37	1.25
2	B	2267	ASP	CG-OD2	5.09	1.37	1.25
2	B	1983	PHE	CD1-CE1	5.09	1.49	1.39
1	A	712	ASP	CB-CG	5.04	1.62	1.51

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	491	LEU	C-N-CD	-6.36	106.62	120.60
1	A	179	CYS	CA-CB-SG	-5.99	103.21	114.00
2	B	2330	ASP	CB-CG-OD2	-5.94	112.96	118.30
1	A	186	LYS	CD-CE-NZ	5.28	123.84	111.70
1	A	250	ARG	NE-CZ-NH1	5.12	122.86	120.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	430	ALA	Peptide
1	A	693	HIS	Peptide
2	B	1790	ILE	Peptide
2	B	1828	ASP	Peptide

## 5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4937	0	4820	803	1
2	B	5035	0	4902	791	0
3	C	50	0	43	8	0
4	D	28	0	25	0	0
5	E	83	0	70	4	0
6	A	3	0	0	0	0
7	A	1	0	0	0	0
7	B	1	0	0	0	0
All	All	10138	0	9860	1508	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 75.

All (1508) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2046:TRP:CZ3	2:B:2059:ILE:HA	1.37	1.59
1:A:287:GLU:HB3	1:A:673:PHE:CE2	1.51	1.42
2:B:1934:MET:CE	2:B:1940:ILE:HD13	1.46	1.41
2:B:1738:PHE:CD2	2:B:1747:LEU:HD12	1.57	1.36
1:A:65:ARG:CG	1:A:66:PRO:HD3	1.57	1.35
2:B:1738:PHE:CB	2:B:1746:PRO:O	1.75	1.34
2:B:1738:PHE:HB2	2:B:1746:PRO:O	1.19	1.33
2:B:1830:PHE:CD1	2:B:1966:ARG:NH1	2.03	1.26
1:A:114:TYR:CE2	2:B:1997:ARG:HB2	1.69	1.26
2:B:1758:LEU:HD11	2:B:1923:GLY:CA	1.63	1.25
2:B:1786:TYR:HA	2:B:1790:ILE:CD1	1.65	1.25
2:B:1944:LEU:O	2:B:1978:LEU:HD11	1.29	1.25
1:A:395:TYR:HB3	1:A:621:VAL:CG2	1.65	1.25
2:B:2180:MET:HB2	2:B:2322:GLU:OE2	1.32	1.25
2:B:1828:ASP:OD2	2:B:1968:LYS:HA	1.31	1.23
1:A:625:LEU:CD1	1:A:706:LEU:HD11	1.68	1.23
1:A:5:TYR:CE2	1:A:76:ILE:HB	1.72	1.22
2:B:2264:SER:OG	2:B:2301:LEU:HD21	1.35	1.21
2:B:1945:LEU:HG	2:B:1983:PHE:CB	1.68	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:453:LEU:HD21	1:A:533:TYR:CE2	1.75	1.20
2:B:2046:TRP:CZ3	2:B:2059:ILE:CA	2.24	1.18
1:A:417:GLN:OE1	1:A:601:VAL:HG22	1.39	1.18
1:A:657:THR:HG21	2:B:1788:SER:HA	1.25	1.17
2:B:1830:PHE:HD1	2:B:1966:ARG:NH1	1.40	1.17
2:B:1813:LYS:HD2	2:B:1814:THR:H	1.04	1.17
2:B:1945:LEU:CG	2:B:1983:PHE:HB2	1.75	1.16
2:B:2046:TRP:CH2	2:B:2059:ILE:HA	1.81	1.15
2:B:2032:ILE:HG23	2:B:2036:GLN:OE1	1.43	1.15
2:B:2046:TRP:HH2	2:B:2058:SER:O	1.27	1.15
1:A:114:TYR:CD2	2:B:1997:ARG:HD3	1.82	1.14
1:A:395:TYR:CB	1:A:621:VAL:CG2	2.26	1.14
2:B:1947:MET:HE2	2:B:1948:GLY:H	1.07	1.13
2:B:2329:GLN:HG3	2:B:2332:TYR:O	1.44	1.13
2:B:2052:ARG:HD3	2:B:2165:GLU:HB2	1.25	1.12
2:B:2087:GLN:HB3	2:B:2163:ARG:HB2	1.13	1.12
1:A:651:VAL:H	1:A:693:HIS:HB2	1.09	1.12
2:B:1946:SER:CB	2:B:1978:LEU:HD12	1.80	1.12
1:A:621:VAL:HG12	1:A:622:PHE:H	1.07	1.11
1:A:625:LEU:HD13	1:A:706:LEU:CG	1.79	1.11
1:A:105:TYR:HB3	1:A:109:SER:HB3	1.29	1.11
1:A:663:VAL:HG22	2:B:1968:LYS:HD2	1.21	1.10
2:B:1886:THR:CG2	2:B:1913:LYS:NZ	2.16	1.09
2:B:1947:MET:CE	2:B:1948:GLY:H	1.65	1.09
2:B:2083:GLY:HA2	2:B:2140:PHE:CD2	1.87	1.09
2:B:1758:LEU:HD11	2:B:1923:GLY:HA3	1.09	1.09
2:B:1886:THR:HG21	2:B:1913:LYS:NZ	1.67	1.09
2:B:1934:MET:HE2	2:B:1940:ILE:CD1	1.82	1.09
2:B:1786:TYR:HA	2:B:1790:ILE:HD11	1.18	1.08
2:B:2330:ASP:HB3	2:B:2331:LEU:HD23	1.32	1.08
1:A:700:ARG:HH22	2:B:1844:GLU:CB	1.67	1.07
2:B:1891:PHE:HD1	2:B:1892:THR:N	1.51	1.07
2:B:1945:LEU:HA	2:B:1983:PHE:HA	1.27	1.07
2:B:2087:GLN:CB	2:B:2163:ARG:HB2	1.84	1.07
2:B:1743:PHE:CE1	2:B:1778:GLN:NE2	2.21	1.07
2:B:1886:THR:HG21	2:B:1913:LYS:HZ3	0.92	1.07
1:A:75:THR:HG22	1:A:175:ALA:HB3	1.37	1.07
1:A:287:GLU:CB	1:A:673:PHE:CE2	2.37	1.07
2:B:1813:LYS:HD2	2:B:1814:THR:N	1.68	1.06
2:B:2169:CYS:O	2:B:2170:ASP:HB3	1.34	1.06
2:B:2187:ASP:HB2	2:B:2206:SER:HB3	1.37	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:65:ARG:CG	1:A:66:PRO:CD	2.33	1.06
1:A:5:TYR:HE2	1:A:76:ILE:HB	1.07	1.06
1:A:148:ALA:HA	1:A:180:ARG:NH2	1.69	1.06
2:B:1934:MET:CE	2:B:1940:ILE:CD1	2.34	1.06
1:A:100:ALA:HB2	1:A:138:TRP:CZ3	1.90	1.05
1:A:395:TYR:HB3	1:A:621:VAL:HG23	1.07	1.05
2:B:1828:ASP:OD2	2:B:1968:LYS:CA	2.03	1.05
2:B:1886:THR:CG2	2:B:1913:LYS:HZ3	1.67	1.05
2:B:1934:MET:HE2	2:B:1940:ILE:HD13	1.07	1.05
1:A:471:ARG:HG2	1:A:585:TRP:CE3	1.91	1.05
2:B:2052:ARG:CD	2:B:2165:GLU:HB2	1.87	1.05
1:A:65:ARG:HG2	1:A:66:PRO:HD3	1.12	1.05
2:B:1707:TRP:HE1	2:B:1758:LEU:HD21	1.18	1.05
2:B:1838:PHE:HZ	2:B:1947:MET:HG3	1.15	1.04
1:A:141:LEU:HD23	1:A:143:GLU:H	1.22	1.03
2:B:1963:PHE:CD1	2:B:1986:VAL:HG11	1.94	1.03
2:B:2096:LEU:HB3	2:B:2161:THR:HG21	1.08	1.03
2:B:2273:LEU:HD21	2:B:2280:VAL:CG2	1.88	1.03
1:A:491:LEU:O	1:A:493:LYS:N	1.92	1.02
1:A:625:LEU:CD1	1:A:706:LEU:CD1	2.36	1.02
2:B:1790:ILE:HA	2:B:1817:TRP:CE3	1.95	1.02
2:B:1909:ASP:O	2:B:1913:LYS:HB2	1.58	1.02
2:B:2273:LEU:HD21	2:B:2280:VAL:HG21	1.36	1.02
1:A:531:ARG:HB2	1:A:551:LEU:O	1.58	1.01
1:A:700:ARG:HH22	2:B:1844:GLU:HB2	1.20	1.01
1:A:615:HIS:HB2	1:A:703:THR:HB	1.40	1.01
1:A:662:MET:HG3	1:A:680:MET:HE1	1.39	1.01
2:B:1946:SER:HB3	2:B:1978:LEU:HD12	1.36	1.01
2:B:1983:PHE:CD1	2:B:1984:GLU:N	2.29	1.01
2:B:2038:THR:HG21	2:B:2072:LYS:HE2	1.42	1.01
1:A:432:THR:OG1	1:A:440:GLU:HB3	1.61	1.01
2:B:1758:LEU:HD11	2:B:1923:GLY:N	1.75	1.01
1:A:622:PHE:O	1:A:705:LEU:HB2	1.60	1.00
2:B:1707:TRP:NE1	2:B:1758:LEU:CD2	2.24	0.99
1:A:395:TYR:HB2	1:A:621:VAL:HG21	1.45	0.99
2:B:1829:GLU:H	2:B:1966:ARG:HD2	1.26	0.99
2:B:2083:GLY:HA2	2:B:2140:PHE:HD2	1.22	0.98
1:A:287:GLU:HB3	1:A:673:PHE:CD2	1.97	0.98
1:A:625:LEU:HD13	1:A:706:LEU:CD1	1.91	0.98
2:B:1758:LEU:CD1	2:B:1923:GLY:HA3	1.92	0.98
1:A:663:VAL:CG2	2:B:1968:LYS:HD2	1.93	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2046:TRP:CH2	2:B:2058:SER:O	2.17	0.98
2:B:2306:LEU:HD23	2:B:2307:ARG:H	1.25	0.98
1:A:389:GLU:OE1	1:A:431:TYR:CE2	2.16	0.98
2:B:2052:ARG:H	2:B:2163:ARG:HB3	1.25	0.98
2:B:2169:CYS:O	2:B:2170:ASP:CB	2.09	0.97
2:B:2329:GLN:O	2:B:2332:TYR:O	1.81	0.97
1:A:622:PHE:CE1	1:A:702:MET:O	2.16	0.97
1:A:617:ILE:O	1:A:618:ASN:HB2	1.60	0.97
2:B:1946:SER:HB3	2:B:1978:LEU:CD1	1.94	0.97
2:B:1964:THR:O	2:B:1986:VAL:HG13	1.64	0.97
1:A:180:ARG:O	1:A:183:SER:HB3	1.65	0.96
1:A:625:LEU:HD13	1:A:706:LEU:HG	1.43	0.96
2:B:1944:LEU:O	2:B:1978:LEU:CD1	2.12	0.96
2:B:1738:PHE:HD2	2:B:1747:LEU:HD12	0.91	0.96
2:B:1934:MET:HB3	2:B:2016:VAL:HB	1.45	0.96
2:B:1934:MET:HE3	2:B:1940:ILE:HD13	1.42	0.96
1:A:287:GLU:HB3	1:A:673:PHE:HE2	1.15	0.96
2:B:1829:GLU:H	2:B:1966:ARG:CD	1.79	0.96
1:A:433:ASP:O	1:A:434:GLU:HG3	1.65	0.95
2:B:2051:ALA:HB1	2:B:2164:MET:H	1.31	0.95
1:A:398:LEU:HD23	1:A:399:VAL:HG12	1.43	0.95
1:A:656:TYR:CZ	2:B:1791:SER:HB2	2.01	0.95
1:A:642:ILE:HG22	1:A:643:GLY:H	1.29	0.95
3:C:3:BMA:H61	3:C:4:MAN:H3	1.45	0.95
1:A:114:TYR:HE2	2:B:1997:ARG:HB2	1.01	0.95
1:A:501:PHE:O	1:A:503:ILE:HG12	1.64	0.95
1:A:663:VAL:HG22	2:B:1968:LYS:CD	1.95	0.95
2:B:2273:LEU:CD2	2:B:2280:VAL:CG2	2.45	0.94
1:A:312:ILE:HD12	1:A:315:HIS:CE1	2.03	0.94
2:B:1829:GLU:N	2:B:1966:ARG:HD2	1.82	0.94
2:B:2034:ASP:HB3	2:B:2049:LYS:HD2	1.49	0.94
2:B:2087:GLN:HB3	2:B:2163:ARG:CB	1.97	0.94
2:B:2264:SER:CB	2:B:2301:LEU:CD2	2.46	0.94
1:A:395:TYR:CB	1:A:621:VAL:HG21	1.94	0.94
1:A:187:GLU:HA	1:A:190:GLN:HB3	1.47	0.94
2:B:2046:TRP:HZ3	2:B:2060:ASN:N	1.65	0.94
2:B:1738:PHE:HB3	2:B:1746:PRO:O	1.67	0.94
1:A:10:VAL:HG23	1:A:52:VAL:HG21	1.50	0.93
2:B:1838:PHE:CZ	2:B:1947:MET:HG3	2.02	0.93
1:A:109:SER:HB2	1:A:137:VAL:O	1.68	0.93
1:A:617:ILE:HD13	1:A:706:LEU:HD13	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:306:PHE:HD1	1:A:306:PHE:N	1.65	0.93
2:B:2096:LEU:HB3	2:B:2161:THR:CG2	1.99	0.93
1:A:700:ARG:NH2	2:B:1844:GLU:HB2	1.83	0.93
2:B:2046:TRP:HZ3	2:B:2059:ILE:CA	1.70	0.93
2:B:1829:GLU:HB2	2:B:1966:ARG:HD2	1.51	0.93
2:B:2052:ARG:HD3	2:B:2165:GLU:CB	1.98	0.92
1:A:114:TYR:HD2	2:B:1997:ARG:HD3	1.24	0.92
1:A:114:TYR:HE2	2:B:1997:ARG:CB	1.80	0.92
2:B:1743:PHE:HE1	2:B:1778:GLN:CD	1.72	0.92
1:A:157:SER:HB2	1:A:174:GLY:O	1.67	0.92
1:A:498:LEU:HD12	1:A:498:LEU:H	1.32	0.92
1:A:656:TYR:CB	1:A:686:GLY:HA2	1.99	0.92
1:A:615:HIS:HB2	1:A:703:THR:CB	2.00	0.91
2:B:1707:TRP:NE1	2:B:1758:LEU:HD21	1.83	0.91
2:B:1738:PHE:CD2	2:B:1747:LEU:CD1	2.51	0.91
2:B:2039:ALA:HB2	2:B:2048:PRO:HG2	1.49	0.91
1:A:688:TRP:HE1	2:B:1800:ALA:N	1.68	0.91
2:B:1789:LEU:HD23	2:B:1823:MET:HB3	1.53	0.91
2:B:1946:SER:HB3	2:B:1978:LEU:HB3	1.50	0.91
1:A:287:GLU:CB	1:A:673:PHE:HE2	1.79	0.91
1:A:480:ILE:HG22	1:A:481:THR:H	1.35	0.91
1:A:57:HIS:HB2	1:A:89:LYS:NZ	1.85	0.91
1:A:186:LYS:O	1:A:190:GLN:N	2.05	0.90
1:A:471:ARG:CG	1:A:585:TRP:CZ3	2.55	0.90
2:B:1790:ILE:HG12	2:B:1817:TRP:CZ3	2.07	0.90
2:B:1934:MET:CB	2:B:2016:VAL:HB	2.02	0.89
2:B:1983:PHE:O	2:B:1984:GLU:HB2	1.71	0.89
2:B:2264:SER:CB	2:B:2301:LEU:HD21	2.01	0.89
1:A:621:VAL:HG12	1:A:622:PHE:N	1.88	0.89
2:B:2213:GLN:HA	2:B:2217:ASN:HD22	1.38	0.89
1:A:656:TYR:CE1	2:B:1791:SER:HB2	2.08	0.89
1:A:670:LEU:HD12	1:A:671:PHE:H	1.36	0.89
1:A:105:TYR:CB	1:A:109:SER:HB3	2.02	0.88
1:A:105:TYR:CD2	1:A:110:GLU:HB3	2.08	0.88
2:B:1791:SER:O	2:B:1793:GLU:HG3	1.74	0.88
2:B:1973:MET:HE3	2:B:1976:TYR:HB2	1.54	0.88
1:A:165:VAL:HG12	1:A:206:LYS:HG2	1.54	0.88
2:B:1829:GLU:CB	2:B:1966:ARG:HD2	2.02	0.87
1:A:65:ARG:CB	1:A:66:PRO:CD	2.52	0.87
1:A:651:VAL:N	1:A:693:HIS:HB2	1.89	0.87
1:A:7:LEU:HD11	1:A:51:PHE:HB3	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:396:ALA:HB1	1:A:397:PRO:HA	1.57	0.86
2:B:2048:PRO:HG3	2:B:2062:TRP:CD1	2.10	0.86
2:B:2096:LEU:CB	2:B:2161:THR:HG21	2.01	0.86
2:B:2245:THR:C	2:B:2286:ASN:HD21	1.78	0.86
2:B:2055:TYR:HD1	2:B:2060:ASN:ND2	1.73	0.86
1:A:617:ILE:CD1	1:A:706:LEU:HD13	2.05	0.86
2:B:2262:ILE:H	2:B:2262:ILE:HD12	1.41	0.86
1:A:625:LEU:HD11	1:A:706:LEU:HD11	1.57	0.85
1:A:656:TYR:HB2	1:A:686:GLY:HA2	1.57	0.85
2:B:1707:TRP:HE1	2:B:1758:LEU:CD2	1.88	0.85
1:A:395:TYR:HE2	1:A:614:MET:HG3	1.39	0.85
1:A:656:TYR:HB2	1:A:686:GLY:CA	2.05	0.85
2:B:1829:GLU:HB2	2:B:1966:ARG:NH1	1.92	0.85
1:A:65:ARG:CB	1:A:66:PRO:HD3	2.06	0.84
2:B:1738:PHE:CE2	2:B:1747:LEU:HD12	2.12	0.84
1:A:453:LEU:CD2	1:A:533:TYR:CE2	2.61	0.84
1:A:182:GLY:O	1:A:186:LYS:HE3	1.77	0.84
1:A:705:LEU:O	1:A:706:LEU:HB2	1.77	0.84
2:B:1786:TYR:CA	2:B:1790:ILE:HD11	2.06	0.84
2:B:1830:PHE:CE1	2:B:1966:ARG:NH1	2.45	0.84
1:A:389:GLU:OE1	1:A:429:MET:CE	2.25	0.84
1:A:448:ILE:HD13	1:A:448:ILE:H	1.42	0.83
2:B:1829:GLU:HB2	2:B:1966:ARG:CD	2.07	0.83
1:A:237:TYR:CG	1:A:242:LEU:HB3	2.13	0.83
1:A:656:TYR:OH	2:B:1792:TYR:CE1	2.29	0.83
2:B:1790:ILE:HG12	2:B:1817:TRP:HZ3	1.42	0.83
1:A:141:LEU:CD2	1:A:143:GLU:HB3	2.08	0.83
1:A:696:ASP:O	1:A:699:ASN:HB2	1.77	0.83
2:B:1786:TYR:HA	2:B:1790:ILE:HD12	1.60	0.83
2:B:2180:MET:CB	2:B:2322:GLU:OE2	2.21	0.83
1:A:485:PRO:HD3	1:A:498:LEU:HD21	1.59	0.83
2:B:1707:TRP:NE1	2:B:1758:LEU:HD23	1.92	0.83
1:A:378:HIS:HB3	1:A:379:PRO:HD2	1.59	0.83
2:B:2055:TYR:HD1	2:B:2060:ASN:HD22	1.24	0.83
1:A:541:ARG:HG2	1:A:585:TRP:HE1	1.44	0.83
2:B:1732:LYS:HG2	2:B:1849:SER:O	1.78	0.83
2:B:1738:PHE:HB3	2:B:1747:LEU:HA	1.61	0.83
1:A:281:HIS:ND1	1:A:524:SER:HB3	1.94	0.83
1:A:686:GLY:O	1:A:687:LEU:HD23	1.79	0.83
1:A:649:LEU:O	1:A:695:SER:HB3	1.77	0.82
2:B:2055:TYR:HA	2:B:2060:ASN:HB3	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:271:LEU:HD22	1:A:274:HIS:HB2	1.61	0.82
1:A:471:ARG:HG2	1:A:585:TRP:HE3	1.41	0.82
2:B:2083:GLY:CA	2:B:2140:PHE:HD2	1.91	0.82
2:B:2264:SER:OG	2:B:2301:LEU:CD2	2.24	0.82
2:B:2330:ASP:HB3	2:B:2331:LEU:CD2	2.09	0.82
1:A:169:ASN:O	1:A:170:SER:OG	1.98	0.82
2:B:1947:MET:HE2	2:B:1948:GLY:N	1.91	0.82
1:A:285:SER:HB2	1:A:676:GLU:OE2	1.78	0.82
1:A:287:GLU:CB	1:A:673:PHE:CD2	2.61	0.82
2:B:2262:ILE:HD12	2:B:2262:ILE:N	1.94	0.82
1:A:428:PHE:HE1	1:A:547:LEU:HB3	1.42	0.82
1:A:615:HIS:CB	1:A:703:THR:HB	2.09	0.82
2:B:1983:PHE:HD1	2:B:1984:GLU:H	1.23	0.81
2:B:1829:GLU:CA	2:B:1966:ARG:HD2	2.10	0.81
1:A:65:ARG:HG3	1:A:66:PRO:N	1.96	0.81
2:B:1883:PHE:O	2:B:1917:ARG:HA	1.80	0.81
1:A:471:ARG:HG2	1:A:585:TRP:CZ3	2.16	0.81
2:B:1946:SER:CB	2:B:1978:LEU:HB3	2.08	0.81
1:A:471:ARG:CG	1:A:585:TRP:HZ3	1.93	0.81
2:B:1940:ILE:HD12	2:B:1990:PRO:HD3	1.63	0.81
1:A:534:SER:HB3	1:A:536:PHE:HE1	1.45	0.81
2:B:1885:GLU:O	2:B:1887:LYS:N	2.13	0.81
1:A:575:LEU:N	1:A:618:ASN:OD1	2.14	0.81
1:A:495:VAL:HG21	1:A:501:PHE:HB2	1.63	0.80
2:B:1934:MET:HB3	2:B:2016:VAL:CB	2.10	0.80
2:B:2306:LEU:HD23	2:B:2307:ARG:N	1.95	0.80
1:A:100:ALA:HB2	1:A:138:TRP:CE3	2.15	0.80
1:A:664:TYR:CE1	2:B:1826:THR:HG23	2.14	0.80
1:A:191:THR:OG1	1:A:193:HIS:ND1	2.14	0.80
2:B:1736:GLN:OE1	2:B:1747:LEU:HD21	1.81	0.80
2:B:2052:ARG:N	2:B:2163:ARG:HB3	1.96	0.80
2:B:1849:SER:OG	2:B:1888:SER:HB2	1.81	0.80
2:B:2036:GLN:NE2	2:B:2076:LEU:HD11	1.96	0.80
1:A:83:THR:HG22	1:A:140:VAL:H	1.46	0.80
2:B:1758:LEU:CD1	2:B:1922:ASN:C	2.50	0.80
2:B:1909:ASP:O	2:B:1913:LYS:CB	2.30	0.80
1:A:7:LEU:HD21	1:A:51:PHE:CD2	2.17	0.80
1:A:249:HIS:NE2	1:A:303:LEU:HD11	1.97	0.79
1:A:285:SER:CB	1:A:676:GLU:OE2	2.30	0.79
2:B:2273:LEU:CD2	2:B:2280:VAL:HG23	2.12	0.79
1:A:461:LEU:HB2	1:A:513:TRP:HB2	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1739:THR:H	2:B:1746:PRO:HG2	1.48	0.79
1:A:656:TYR:CG	1:A:686:GLY:HA2	2.17	0.79
2:B:1945:LEU:HD12	2:B:1945:LEU:H	1.47	0.79
1:A:293:PHE:CD1	2:B:1975:LEU:HD21	2.18	0.79
1:A:656:TYR:O	1:A:658:PHE:N	2.16	0.79
1:A:428:PHE:CE1	1:A:547:LEU:HB3	2.18	0.79
2:B:1982:VAL:O	2:B:1983:PHE:CD2	2.36	0.79
2:B:1829:GLU:HB2	2:B:1966:ARG:CZ	2.12	0.79
2:B:1790:ILE:HA	2:B:1817:TRP:CZ3	2.18	0.78
2:B:1952:ASN:HB3	2:B:1954:HIS:NE2	1.98	0.78
1:A:464:ILE:HG23	1:A:510:LYS:HG2	1.65	0.78
2:B:1865:PRO:O	2:B:1867:HIS:N	2.15	0.78
1:A:530:THR:OG1	1:A:679:PHE:HB3	1.82	0.78
1:A:647:ASP:OD1	2:B:1950:ASN:ND2	2.16	0.78
2:B:2081:ILE:HD12	2:B:2149:ILE:HD11	1.64	0.78
1:A:157:SER:HA	1:A:176:LEU:H	1.45	0.78
1:A:631:LEU:HD21	1:A:632:HIS:ND1	1.98	0.78
2:B:1813:LYS:CD	2:B:1814:THR:H	1.94	0.78
1:A:656:TYR:HH	2:B:1792:TYR:HE1	1.28	0.78
1:A:147:MET:HE3	2:B:1972:LYS:HE3	1.65	0.78
1:A:448:ILE:HD12	1:A:619:GLY:HA3	1.63	0.78
2:B:1886:THR:HG22	2:B:1913:LYS:NZ	1.99	0.78
2:B:1945:LEU:HG	2:B:1983:PHE:HB2	0.82	0.78
1:A:289:SER:HB3	1:A:290:PRO:CD	2.13	0.77
1:A:432:THR:HA	1:A:438:THR:OG1	1.82	0.77
2:B:1838:PHE:HZ	2:B:1947:MET:CG	1.96	0.77
1:A:526:PRO:O	1:A:679:PHE:HZ	1.67	0.77
2:B:1830:PHE:HD1	2:B:1966:ARG:HH12	0.83	0.77
1:A:100:ALA:HB2	1:A:138:TRP:HZ3	1.49	0.77
1:A:700:ARG:HH22	2:B:1844:GLU:HB3	1.49	0.77
1:A:278:VAL:HG23	1:A:279:ARG:H	1.49	0.77
2:B:1699:PHE:CG	2:B:1740:ASP:OD1	2.38	0.77
1:A:529:LEU:CD1	1:A:553:ILE:HB	2.15	0.77
2:B:1863:LEU:HB2	2:B:1870:GLN:H	1.48	0.77
2:B:1891:PHE:CD1	2:B:1892:THR:N	2.40	0.77
2:B:2046:TRP:HZ3	2:B:2059:ILE:C	1.88	0.77
1:A:278:VAL:HG12	1:A:296:ALA:HB2	1.67	0.77
2:B:2081:ILE:HG13	2:B:2144:ILE:HB	1.66	0.77
1:A:456:GLU:O	1:A:459:ASP:HB2	1.83	0.77
2:B:2042:GLN:HE21	2:B:2047:ALA:HA	1.47	0.77
2:B:2089:ALA:O	2:B:2096:LEU:HB2	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1773:VAL:HG11	2:B:1785:PHE:CE1	2.20	0.76
2:B:2187:ASP:HB2	2:B:2206:SER:CB	2.16	0.76
2:B:2042:GLN:OE1	2:B:2042:GLN:N	2.17	0.76
1:A:529:LEU:HA	1:A:679:PHE:CE1	2.20	0.76
2:B:2234:PHE:HB2	2:B:2304:ARG:O	1.85	0.76
1:A:474:ASN:O	1:A:535:SER:HA	1.85	0.76
2:B:1882:ILE:HD11	2:B:1919:HIS:ND1	1.99	0.76
1:A:100:ALA:CB	1:A:138:TRP:CZ3	2.68	0.76
1:A:148:ALA:CA	1:A:180:ARG:NH2	2.49	0.76
2:B:2000:CYS:SG	2:B:2002:ILE:HD12	2.25	0.76
1:A:77:GLN:HB3	1:A:177:LEU:HD12	1.68	0.76
1:A:491:LEU:HB3	1:A:492:PRO:HD2	1.68	0.76
2:B:1751:GLU:HG3	2:B:2117:GLY:H	1.51	0.76
2:B:1789:LEU:CD2	2:B:1823:MET:HB3	2.16	0.76
2:B:1735:PHE:HE1	2:B:1851:LEU:HG	1.50	0.76
2:B:2013:LEU:HD22	2:B:2013:LEU:N	2.01	0.75
1:A:281:HIS:CE1	1:A:524:SER:HB3	2.22	0.75
1:A:613:ILE:O	1:A:613:ILE:HG13	1.85	0.75
2:B:1795:ASP:OD2	2:B:1800:ALA:HB2	1.87	0.75
1:A:382:TRP:HE1	1:A:454:TYR:HB3	1.51	0.75
1:A:622:PHE:CZ	1:A:702:MET:O	2.39	0.75
2:B:1707:TRP:CE2	2:B:1758:LEU:HD23	2.22	0.75
1:A:287:GLU:CA	1:A:673:PHE:HE2	2.00	0.74
1:A:688:TRP:CZ2	2:B:1799:GLY:HA2	2.22	0.74
2:B:2027:MET:HB3	2:B:2165:GLU:HG2	1.67	0.74
1:A:668:LEU:HG	2:B:1788:SER:OG	1.86	0.74
1:A:311:HIS:O	1:A:312:ILE:HG12	1.87	0.74
1:A:454:TYR:HE1	1:A:456:GLU:HG2	1.50	0.74
1:A:651:VAL:HG13	1:A:668:LEU:HA	1.67	0.74
2:B:1886:THR:CG2	2:B:1913:LYS:HZ1	1.99	0.74
2:B:2034:ASP:CB	2:B:2049:LYS:HD2	2.17	0.74
1:A:662:MET:HG3	1:A:680:MET:CE	2.17	0.74
1:A:385:TYR:CD2	1:A:436:PHE:O	2.40	0.74
1:A:503:ILE:O	1:A:504:LEU:HD12	1.86	0.74
1:A:393:TRP:CD1	1:A:395:TYR:HE1	2.05	0.74
1:A:105:TYR:O	1:A:106:TRP:HB2	1.86	0.74
2:B:1738:PHE:HD2	2:B:1747:LEU:CD1	1.87	0.74
1:A:306:PHE:N	1:A:306:PHE:CD1	2.40	0.73
1:A:453:LEU:HD21	1:A:533:TYR:HE2	1.49	0.73
2:B:2329:GLN:HG3	2:B:2332:TYR:C	2.09	0.73
1:A:90:ASN:OD1	1:A:92:ALA:HB3	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:TYR:CE2	1:A:110:GLU:HB3	2.23	0.73
2:B:1997:ARG:HD2	2:B:2011:SER:OG	1.88	0.73
1:A:471:ARG:CG	1:A:585:TRP:CE3	2.67	0.73
1:A:480:ILE:HG22	1:A:481:THR:N	2.03	0.73
1:A:471:ARG:HG3	1:A:585:TRP:HZ3	1.53	0.73
1:A:617:ILE:HD11	1:A:705:LEU:O	1.88	0.73
2:B:1964:THR:O	2:B:1986:VAL:CG1	2.36	0.73
1:A:148:ALA:HA	1:A:180:ARG:HH22	1.53	0.73
2:B:1889:TRP:HA	2:B:1889:TRP:CE3	2.22	0.73
1:A:123:LYS:HA	1:A:126:ASP:HB2	1.69	0.73
1:A:389:GLU:OE1	1:A:431:TYR:CZ	2.42	0.72
1:A:491:LEU:C	1:A:493:LYS:H	1.91	0.72
1:A:495:VAL:HG22	1:A:496:LYS:N	2.04	0.72
2:B:1759:LEU:HD22	2:B:1854:PRO:HG3	1.71	0.72
2:B:1891:PHE:HD1	2:B:1892:THR:H	0.80	0.72
2:B:2081:ILE:HA	2:B:2168:GLY:HA3	1.71	0.72
1:A:412:LEU:HA	1:A:420:GLY:HA3	1.72	0.72
1:A:65:ARG:HG3	1:A:66:PRO:CD	2.17	0.72
1:A:114:TYR:O	1:A:116:ASP:N	2.22	0.72
1:A:653:PHE:HB2	1:A:693:HIS:HE1	1.55	0.72
1:A:664:TYR:CD1	2:B:1826:THR:HG23	2.25	0.72
1:A:697:PHE:CG	1:A:698:ARG:N	2.58	0.72
1:A:416:PRO:HA	1:A:596:PRO:HG3	1.71	0.72
2:B:1947:MET:CE	2:B:1948:GLY:N	2.47	0.72
2:B:1997:ARG:HG2	2:B:1999:GLU:HG3	1.72	0.72
2:B:2032:ILE:CG2	2:B:2036:GLN:OE1	2.30	0.72
1:A:624:SER:C	1:A:625:LEU:HD12	2.10	0.72
2:B:2036:GLN:HG2	2:B:2076:LEU:HD21	1.71	0.72
1:A:700:ARG:NH1	2:B:1843:LEU:HB3	2.05	0.72
2:B:1830:PHE:HD2	2:B:1985:THR:HG1	1.34	0.72
1:A:50:LEU:HB3	1:A:171:GLY:HA3	1.72	0.71
1:A:663:VAL:HG13	2:B:1968:LYS:HB2	1.72	0.71
1:A:375:ALA:C	1:A:376:LYS:HG2	2.10	0.71
2:B:1758:LEU:HD11	2:B:1922:ASN:C	2.10	0.71
1:A:473:TYR:CD2	1:A:547:LEU:HD11	2.25	0.71
1:A:651:VAL:CG1	1:A:668:LEU:HA	2.19	0.71
2:B:1963:PHE:CG	2:B:1986:VAL:HG11	2.24	0.71
1:A:375:ALA:O	1:A:376:LYS:HG2	1.90	0.71
1:A:616:SER:O	1:A:620:TYR:N	2.21	0.71
2:B:1707:TRP:HA	2:B:1707:TRP:CE3	2.26	0.71
2:B:2097:TYR:CZ	2:B:2157:SER:OG	2.41	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:98:LEU:HB3	1:A:136:TYR:CZ	2.25	0.71
2:B:1934:MET:HE3	2:B:1940:ILE:CD1	2.10	0.71
1:A:605:ASP:O	1:A:609:GLN:HG3	1.91	0.71
2:B:2055:TYR:CD1	2:B:2060:ASN:ND2	2.55	0.71
2:B:2273:LEU:CD2	2:B:2280:VAL:HG21	2.12	0.71
1:A:4:ARG:HG3	1:A:85:VAL:HG23	1.71	0.71
1:A:420:GLY:O	1:A:421:ARG:HG2	1.91	0.71
2:B:1789:LEU:N	2:B:1789:LEU:HD12	2.06	0.71
2:B:1878:LEU:HA	2:B:1922:ASN:HD21	1.55	0.71
2:B:2087:GLN:HG2	2:B:2163:ARG:CD	2.20	0.71
2:B:2149:ILE:HD12	2:B:2166:LEU:HD22	1.72	0.71
1:A:667:THR:O	1:A:669:THR:N	2.24	0.71
1:A:667:THR:OG1	1:A:668:LEU:N	2.24	0.71
2:B:2264:SER:HB3	2:B:2301:LEU:CD2	2.21	0.70
1:A:428:PHE:HE2	1:A:475:ILE:HG12	1.55	0.70
1:A:663:VAL:CG1	2:B:1968:LYS:HB2	2.21	0.70
2:B:1786:TYR:CA	2:B:1790:ILE:CD1	2.58	0.70
2:B:1819:VAL:HA	2:B:1823:MET:CE	2.21	0.70
2:B:1945:LEU:HA	2:B:1983:PHE:CA	2.15	0.70
5:E:3:BMA:O3	5:E:5:MAN:C1	2.39	0.70
1:A:646:THR:OG1	2:B:1950:ASN:OD1	2.09	0.70
1:A:522:THR:N	1:A:525:ASP:OD1	2.24	0.70
2:B:1735:PHE:HE1	2:B:1851:LEU:CG	2.04	0.70
1:A:412:LEU:HA	1:A:420:GLY:CA	2.21	0.70
1:A:287:GLU:HG2	1:A:673:PHE:HD2	1.57	0.70
2:B:1743:PHE:CE1	2:B:1778:GLN:CD	2.57	0.70
2:B:1948:GLY:HA3	2:B:1952:ASN:HD21	1.57	0.70
2:B:2051:ALA:HA	2:B:2163:ARG:HA	1.73	0.70
2:B:1731:LYS:H	2:B:1893:GLU:CD	1.96	0.70
1:A:147:MET:O	1:A:148:ALA:HB3	1.91	0.70
1:A:651:VAL:HB	1:A:693:HIS:CE1	2.26	0.70
1:A:287:GLU:CG	1:A:673:PHE:CD2	2.75	0.69
2:B:1758:LEU:HD12	2:B:1922:ASN:C	2.12	0.69
1:A:534:SER:HB3	1:A:536:PHE:CE1	2.27	0.69
2:B:2306:LEU:CD2	2:B:2307:ARG:N	2.55	0.69
2:B:1997:ARG:CD	2:B:2011:SER:OG	2.41	0.69
1:A:147:MET:CE	2:B:1972:LYS:HE3	2.21	0.69
2:B:1763:ILE:HG23	2:B:1855:LEU:HG	1.73	0.69
1:A:616:SER:O	1:A:617:ILE:HG22	1.93	0.69
2:B:1834:ALA:O	2:B:1945:LEU:HD21	1.91	0.69
2:B:2034:ASP:HB3	2:B:2049:LYS:CD	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1945:LEU:H	2:B:1945:LEU:CD1	2.05	0.69
2:B:1838:PHE:CZ	2:B:1947:MET:CG	2.75	0.69
1:A:287:GLU:CG	1:A:673:PHE:HD2	2.05	0.69
1:A:395:TYR:CE2	1:A:614:MET:HG3	2.26	0.69
1:A:486:LEU:O	1:A:487:TYR:HB2	1.92	0.69
1:A:7:LEU:HD12	1:A:52:VAL:O	1.91	0.68
1:A:249:HIS:CD2	1:A:303:LEU:HD11	2.27	0.68
1:A:289:SER:HB3	1:A:290:PRO:HD2	1.73	0.68
1:A:454:TYR:CE1	1:A:456:GLU:HG2	2.28	0.68
1:A:687:LEU:HD12	2:B:1795:ASP:OD2	1.93	0.68
2:B:1849:SER:CB	2:B:1888:SER:HB2	2.23	0.68
2:B:1934:MET:HE3	2:B:1940:ILE:HG21	1.74	0.68
1:A:495:VAL:HG22	1:A:496:LYS:H	1.58	0.68
2:B:1963:PHE:HB2	2:B:1986:VAL:CG1	2.23	0.68
1:A:127:LYS:HG3	1:A:162:VAL:HG11	1.74	0.68
1:A:272:GLU:HB3	1:A:306:PHE:HB3	1.73	0.68
1:A:281:HIS:HB3	1:A:525:ASP:HB3	1.73	0.68
1:A:396:ALA:HB1	1:A:397:PRO:CA	2.23	0.68
2:B:2273:LEU:O	2:B:2275:PHE:CD1	2.47	0.68
2:B:1889:TRP:HA	2:B:1889:TRP:HE3	1.57	0.68
1:A:147:MET:HE2	2:B:1972:LYS:HB2	1.75	0.68
1:A:432:THR:OG1	1:A:440:GLU:CB	2.40	0.68
1:A:587:LEU:O	1:A:591:ILE:HG22	1.94	0.68
1:A:684:ASN:O	1:A:686:GLY:N	2.23	0.68
2:B:1776:ARG:HG2	2:B:1812:THR:HG22	1.76	0.68
1:A:65:ARG:HB3	1:A:66:PRO:CD	2.23	0.68
2:B:1831:ASP:O	2:B:1858:CYS:HB3	1.94	0.68
2:B:1838:PHE:CZ	2:B:1947:MET:SD	2.87	0.68
2:B:1942:TRP:HB3	2:B:1944:LEU:HD21	1.75	0.68
1:A:57:HIS:HB2	1:A:89:LYS:HZ1	1.59	0.68
1:A:428:PHE:HE2	1:A:475:ILE:CG1	2.06	0.68
1:A:457:VAL:CG1	1:A:517:VAL:HA	2.24	0.68
1:A:57:HIS:O	1:A:58:LEU:HG	1.94	0.67
1:A:141:LEU:HD22	1:A:143:GLU:HB3	1.75	0.67
1:A:480:ILE:CG2	1:A:481:THR:H	2.06	0.67
1:A:642:ILE:HG22	1:A:643:GLY:N	2.06	0.67
2:B:2262:ILE:HD11	2:B:2283:PHE:CE1	2.28	0.67
3:C:3:BMA:H61	3:C:4:MAN:C3	2.13	0.67
1:A:97:SER:O	1:A:160:SER:HB3	1.94	0.67
1:A:605:ASP:OD2	1:A:607:GLU:HB3	1.93	0.67
2:B:2042:GLN:HB3	2:B:2062:TRP:HE1	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2:NAG:O3	3:C:3:BMA:O5	2.11	0.67
1:A:696:ASP:O	1:A:699:ASN:CB	2.42	0.67
2:B:2273:LEU:O	2:B:2275:PHE:CE1	2.48	0.67
1:A:389:GLU:OE1	1:A:429:MET:HE1	1.95	0.67
1:A:581:GLU:HB2	1:A:612:ASN:O	1.95	0.67
1:A:617:ILE:HG12	1:A:706:LEU:CD2	2.25	0.67
1:A:700:ARG:CZ	2:B:1844:GLU:HB2	2.24	0.67
1:A:477:PRO:HG3	1:A:513:TRP:CE2	2.29	0.67
2:B:1784:SER:O	2:B:1839:SER:HA	1.94	0.67
2:B:2096:LEU:HD12	2:B:2159:ARG:HB3	1.77	0.67
1:A:72:LEU:HG	1:A:198:LEU:HD12	1.76	0.67
1:A:538:ASN:HD21	1:A:541:ARG:HB3	1.60	0.67
1:A:428:PHE:CE2	1:A:475:ILE:HG12	2.30	0.67
2:B:2249:LYS:HE3	2:B:2249:LYS:H	1.59	0.67
1:A:700:ARG:NH1	2:B:1844:GLU:HB2	2.10	0.67
1:A:270:PHE:HB2	1:A:309:PHE:HE1	1.59	0.66
1:A:448:ILE:HD13	1:A:448:ILE:N	2.10	0.66
1:A:640:LEU:CB	1:A:677:THR:HB	2.25	0.66
2:B:1837:TYR:CZ	2:B:1853:GLY:HA3	2.30	0.66
2:B:1943:TYR:C	2:B:1944:LEU:HD23	2.15	0.66
2:B:2087:GLN:HG2	2:B:2163:ARG:HD3	1.75	0.66
1:A:94:HIS:HB3	1:A:96:VAL:HG13	1.77	0.66
2:B:1735:PHE:CE1	2:B:1851:LEU:HB2	2.30	0.66
2:B:1819:VAL:HA	2:B:1823:MET:HE2	1.75	0.66
2:B:1849:SER:OG	2:B:1888:SER:CB	2.42	0.66
2:B:1945:LEU:CA	2:B:1983:PHE:HA	2.15	0.66
1:A:457:VAL:HG11	1:A:517:VAL:HA	1.76	0.66
1:A:687:LEU:CD1	2:B:1795:ASP:OD2	2.43	0.66
1:A:700:ARG:HH12	2:B:1844:GLU:HB2	1.59	0.66
2:B:1946:SER:HB2	2:B:1978:LEU:HD12	1.74	0.66
2:B:2036:GLN:HE21	2:B:2076:LEU:HD11	1.59	0.66
1:A:448:ILE:CD1	1:A:618:ASN:O	2.44	0.66
1:A:577:SER:O	1:A:616:SER:HB3	1.96	0.66
2:B:2022:GLN:HG3	2:B:2082:HIS:ND1	2.10	0.66
2:B:2031:HIS:HB2	2:B:2294:VAL:HG11	1.78	0.66
1:A:147:MET:HE3	2:B:1972:LYS:CE	2.26	0.66
2:B:2027:MET:CE	2:B:2032:ILE:HD13	2.25	0.66
1:A:272:GLU:HB2	1:A:307:LEU:H	1.60	0.66
1:A:473:TYR:HA	1:A:537:VAL:CG2	2.25	0.66
1:A:697:PHE:CE1	1:A:698:ARG:HB2	2.31	0.66
1:A:80:VAL:HA	1:A:140:VAL:CG1	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1774:THR:HG22	2:B:1814:THR:CG2	2.25	0.66
2:B:2331:LEU:O	2:B:2332:TYR:HB2	1.95	0.66
1:A:651:VAL:HB	1:A:693:HIS:ND1	2.11	0.65
1:A:475:ILE:HG23	1:A:475:ILE:O	1.97	0.65
1:A:657:THR:O	1:A:658:PHE:HB2	1.94	0.65
1:A:114:TYR:CE2	2:B:1997:ARG:HD3	2.31	0.65
1:A:293:PHE:HD1	2:B:1975:LEU:HD21	1.58	0.65
1:A:664:TYR:OH	2:B:1825:PRO:HA	1.95	0.65
1:A:670:LEU:HG	1:A:672:PRO:HD3	1.79	0.65
2:B:1997:ARG:HG2	2:B:1999:GLU:CG	2.26	0.65
2:B:2129:ASN:HB3	2:B:2134:GLY:HA3	1.78	0.65
1:A:398:LEU:CD2	1:A:399:VAL:HG12	2.23	0.65
1:A:417:GLN:O	1:A:418:ARG:HG2	1.97	0.65
1:A:542:ASP:O	1:A:545:SER:N	2.29	0.65
1:A:623:ASP:OD1	1:A:705:LEU:CB	2.45	0.65
2:B:1749:ARG:HG2	2:B:1749:ARG:HH11	1.62	0.65
2:B:2220:ARG:HH11	2:B:2220:ARG:HB2	1.62	0.65
1:A:87:THR:HG22	1:A:135:THR:CB	2.27	0.65
1:A:473:TYR:HA	1:A:537:VAL:HG22	1.79	0.65
1:A:234:VAL:HG23	1:A:320:MET:HA	1.79	0.65
1:A:417:GLN:HE22	1:A:602:GLN:HB2	1.62	0.65
1:A:656:TYR:CB	1:A:686:GLY:CA	2.67	0.65
2:B:1738:PHE:CE2	2:B:1747:LEU:CD1	2.79	0.65
1:A:278:VAL:HG23	1:A:279:ARG:N	2.10	0.64
2:B:1735:PHE:CD1	2:B:1851:LEU:HB2	2.31	0.64
1:A:390:GLU:OE2	1:A:470:SER:HB2	1.96	0.64
1:A:378:HIS:HB3	1:A:379:PRO:CD	2.25	0.64
1:A:530:THR:O	1:A:531:ARG:NE	2.31	0.64
1:A:486:LEU:HD22	1:A:487:TYR:CG	2.32	0.64
1:A:617:ILE:HG12	1:A:706:LEU:HD22	1.80	0.64
1:A:292:THR:HG23	2:B:1977:ASN:HD21	1.61	0.64
2:B:1947:MET:HE3	2:B:1948:GLY:H	1.62	0.64
2:B:2276:GLN:N	2:B:2279:LYS:O	2.28	0.64
1:A:116:ASP:OD1	1:A:118:THR:HG22	1.98	0.64
2:B:2051:ALA:HB1	2:B:2164:MET:N	2.10	0.64
1:A:166:LYS:O	1:A:207:SER:HB2	1.98	0.64
1:A:686:GLY:O	1:A:687:LEU:CD2	2.45	0.64
1:A:654:SER:HB2	1:A:690:LEU:HB2	1.80	0.64
1:A:688:TRP:HE1	2:B:1799:GLY:C	2.01	0.64
2:B:2054:HIS:O	2:B:2060:ASN:CB	2.45	0.64
2:B:2263:SER:HB2	2:B:2307:ARG:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:121:ARG:HG3	1:A:121:ARG:HH11	1.63	0.64
1:A:271:LEU:HD22	1:A:274:HIS:CB	2.27	0.64
2:B:1829:GLU:HB2	2:B:1966:ARG:NE	2.13	0.64
2:B:2105:TYR:CD2	2:B:2144:ILE:HG23	2.33	0.64
2:B:1787:SER:OG	2:B:1788:SER:N	2.30	0.63
2:B:1837:TYR:CE2	2:B:1853:GLY:HA3	2.34	0.63
2:B:1976:TYR:CE2	2:B:1984:GLU:OE2	2.50	0.63
1:A:271:LEU:HD11	1:A:324:VAL:HG11	1.80	0.63
2:B:1743:PHE:CZ	2:B:1778:GLN:NE2	2.65	0.63
2:B:2046:TRP:CZ3	2:B:2060:ASN:N	2.51	0.63
1:A:448:ILE:H	1:A:448:ILE:CD1	2.10	0.63
2:B:2080:ILE:HG12	2:B:2170:ASP:O	1.98	0.63
2:B:1758:LEU:CD1	2:B:1923:GLY:N	2.54	0.63
2:B:1953:ILE:HD12	2:B:1953:ILE:H	1.63	0.63
2:B:1934:MET:HE3	2:B:1940:ILE:CG1	2.27	0.63
1:A:509:PHE:HD1	1:A:510:LYS:H	1.47	0.63
2:B:2052:ARG:H	2:B:2163:ARG:CB	2.07	0.63
1:A:623:ASP:OD1	1:A:705:LEU:HB2	1.98	0.63
2:B:1939:ARG:NH2	2:B:1987:GLU:OE1	2.21	0.63
2:B:1889:TRP:CZ3	2:B:1890:TYR:HB2	2.34	0.62
2:B:2178:LEU:HD12	2:B:2323:VAL:HB	1.80	0.62
1:A:271:LEU:CD2	1:A:274:HIS:HB2	2.28	0.62
1:A:153:CYS:N	1:A:179:CYS:SG	2.58	0.62
2:B:2115:TYR:CE2	2:B:2140:PHE:HD1	2.17	0.62
2:B:2207:LYS:HD2	2:B:2216:SER:O	1.99	0.62
1:A:453:LEU:HD22	1:A:453:LEU:H	1.63	0.62
1:A:651:VAL:HG12	1:A:652:PHE:N	2.15	0.62
2:B:2042:GLN:HE21	2:B:2047:ALA:CA	2.12	0.62
2:B:2283:PHE:HD2	2:B:2295:ASN:HD22	1.47	0.62
1:A:656:TYR:CE2	2:B:1791:SER:HB2	2.35	0.62
2:B:2330:ASP:CB	2:B:2331:LEU:HD23	2.21	0.62
1:A:453:LEU:HD22	1:A:453:LEU:N	2.15	0.62
2:B:1963:PHE:HB2	2:B:1986:VAL:HG12	1.81	0.62
1:A:457:VAL:HG11	1:A:517:VAL:HG23	1.81	0.62
2:B:2193:SER:HA	2:B:2229:TRP:CZ2	2.34	0.62
1:A:512:LYS:HE3	1:A:514:THR:OG1	2.00	0.61
2:B:1929:LEU:HB3	2:B:2012:THR:OG1	2.00	0.61
2:B:2087:GLN:HG2	2:B:2163:ARG:NE	2.15	0.61
1:A:651:VAL:HB	1:A:693:HIS:CG	2.35	0.61
2:B:1705:ARG:HG2	2:B:1706:LEU:H	1.64	0.61
2:B:1758:LEU:CD1	2:B:1922:ASN:O	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1840:ASP:O	2:B:1841:VAL:HG23	1.99	0.61
1:A:56:ASP:O	1:A:57:HIS:HB3	2.00	0.61
1:A:473:TYR:O	1:A:504:LEU:CD1	2.49	0.61
1:A:529:LEU:HA	1:A:679:PHE:CD1	2.34	0.61
1:A:625:LEU:HD13	1:A:706:LEU:CD2	2.30	0.61
1:A:693:HIS:HB3	1:A:695:SER:HB2	1.81	0.61
2:B:1829:GLU:HB2	2:B:1966:ARG:HH11	1.63	0.61
1:A:282:ARG:HH12	1:A:299:LEU:HD22	1.65	0.61
2:B:1952:ASN:OD1	2:B:1952:ASN:N	2.32	0.61
2:B:2087:GLN:CG	2:B:2163:ARG:HD3	2.30	0.61
1:A:2:THR:OG1	1:A:83:THR:O	2.18	0.61
1:A:507:GLU:HG3	1:A:508:ILE:H	1.65	0.61
1:A:664:TYR:HE1	2:B:1826:THR:HG23	1.64	0.61
2:B:1732:LYS:HE3	2:B:1885:GLU:OE2	2.00	0.61
1:A:87:THR:HG22	1:A:135:THR:HB	1.83	0.61
1:A:615:HIS:HB2	1:A:703:THR:OG1	2.01	0.61
2:B:2193:SER:HB3	2:B:2229:TRP:CD1	2.35	0.61
1:A:291:ILE:HG23	2:B:1955:SER:CB	2.31	0.61
2:B:2083:GLY:CA	2:B:2140:PHE:CD2	2.72	0.61
1:A:85:VAL:HG12	1:A:137:VAL:HA	1.82	0.61
1:A:631:LEU:HD23	1:A:632:HIS:HB2	1.83	0.61
2:B:2052:ARG:HD2	2:B:2165:GLU:HB2	1.78	0.61
1:A:308:LEU:O	1:A:309:PHE:HB3	2.00	0.61
1:A:624:SER:HB2	1:A:625:LEU:HD12	1.83	0.61
2:B:1951:GLU:O	2:B:1953:ILE:HD12	2.00	0.61
1:A:287:GLU:CA	1:A:673:PHE:CE2	2.80	0.60
1:A:395:TYR:HB2	1:A:621:VAL:CG2	2.11	0.60
2:B:1934:MET:O	2:B:1935:ALA:HB3	2.00	0.60
2:B:2087:GLN:CG	2:B:2163:ARG:HB2	2.31	0.60
1:A:664:TYR:HE1	2:B:1826:THR:H	1.46	0.60
2:B:2024:PRO:HA	2:B:2167:MET:HG2	1.84	0.60
2:B:1829:GLU:CB	2:B:1966:ARG:NH1	2.64	0.60
2:B:1856:LEU:HD13	2:B:1943:TYR:CE2	2.37	0.60
2:B:1997:ARG:HD2	2:B:2011:SER:HG	1.67	0.60
1:A:697:PHE:CD1	1:A:698:ARG:N	2.57	0.60
2:B:2180:MET:H	2:B:2185:ILE:HB	1.67	0.60
2:B:2238:MET:HE3	2:B:2326:CYS:O	2.01	0.60
1:A:694:ASN:ND2	1:A:703:THR:O	2.34	0.60
1:A:237:TYR:CD2	1:A:242:LEU:HB3	2.36	0.60
1:A:660:HIS:ND1	1:A:680:MET:HE3	2.17	0.60
1:A:688:TRP:NE1	2:B:1800:ALA:N	2.46	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1912:PHE:O	2:B:1915:ASN:HB2	2.02	0.60
2:B:1962:VAL:HG12	2:B:1974:ALA:HB2	1.83	0.60
2:B:2302:LEU:O	2:B:2302:LEU:HD23	2.01	0.60
1:A:112:ALA:O	1:A:126:ASP:HB3	2.01	0.60
1:A:625:LEU:HD12	1:A:706:LEU:CD1	2.31	0.60
2:B:1767:VAL:O	2:B:1768:GLU:HB2	2.01	0.60
2:B:1774:THR:HG22	2:B:1814:THR:HG22	1.83	0.60
2:B:1875:GLU:OE1	2:B:1943:TYR:OH	2.18	0.60
2:B:2023:THR:HB	2:B:2176:MET:HE3	1.84	0.60
1:A:312:ILE:HD12	1:A:315:HIS:ND1	2.17	0.60
1:A:393:TRP:CD1	1:A:395:TYR:CE1	2.90	0.60
2:B:1870:GLN:OE1	2:B:1872:THR:N	2.31	0.60
2:B:1945:LEU:HD12	2:B:1945:LEU:N	2.17	0.60
1:A:10:VAL:CG2	1:A:52:VAL:HG21	2.30	0.59
1:A:237:TYR:CE1	1:A:242:LEU:HB2	2.36	0.59
1:A:398:LEU:O	1:A:400:LEU:HD23	2.02	0.59
2:B:1735:PHE:CE1	2:B:1851:LEU:HD23	2.36	0.59
1:A:657:THR:HB	2:B:1788:SER:O	2.01	0.59
2:B:1842:ASP:O	2:B:1846:ASP:OD1	2.20	0.59
1:A:658:PHE:CZ	1:A:684:ASN:ND2	2.70	0.59
2:B:1842:ASP:HB2	2:B:1846:ASP:OD2	2.01	0.59
1:A:620:TYR:C	1:A:621:VAL:HG23	2.22	0.59
1:A:8:GLY:HA3	1:A:52:VAL:CG2	2.32	0.59
1:A:72:LEU:HD11	1:A:198:LEU:HB2	1.85	0.59
1:A:147:MET:O	1:A:148:ALA:CB	2.49	0.59
2:B:1787:SER:H	2:B:1790:ILE:CD1	2.15	0.59
1:A:529:LEU:HD11	1:A:553:ILE:HB	1.84	0.59
1:A:155:THR:HG22	1:A:256:HIS:ND1	2.17	0.59
1:A:483:VAL:HG13	1:A:513:TRP:HD1	1.67	0.59
1:A:495:VAL:CG2	1:A:496:LYS:H	2.16	0.59
1:A:623:ASP:OD1	1:A:705:LEU:HG	2.03	0.59
2:B:2213:GLN:HA	2:B:2217:ASN:ND2	2.12	0.59
1:A:386:ILE:HD11	1:A:428:PHE:HD2	1.68	0.59
1:A:685:PRO:HG2	2:B:1822:HIS:HE1	1.68	0.59
1:A:688:TRP:CE2	2:B:1799:GLY:HA2	2.38	0.59
1:A:393:TRP:O	1:A:422:LYS:HA	2.02	0.59
2:B:1849:SER:CA	2:B:1888:SER:HB2	2.33	0.59
1:A:395:TYR:CB	1:A:621:VAL:HG23	1.97	0.59
1:A:624:SER:HB2	1:A:625:LEU:CD1	2.33	0.59
2:B:1989:LEU:HG	2:B:1989:LEU:O	2.03	0.59
1:A:498:LEU:O	1:A:502:PRO:HD2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1735:PHE:CE1	2:B:1851:LEU:CG	2.85	0.58
2:B:1976:TYR:HE2	2:B:1984:GLU:OE1	1.86	0.58
2:B:2220:ARG:HH11	2:B:2220:ARG:CB	2.16	0.58
2:B:1836:ALA:HB2	2:B:1945:LEU:HD23	1.84	0.58
2:B:1934:MET:O	2:B:1935:ALA:CB	2.51	0.58
1:A:423:TYR:CE2	1:A:581:GLU:HG3	2.39	0.58
1:A:382:TRP:CD1	1:A:454:TYR:O	2.57	0.58
2:B:2198:ASN:OD1	2:B:2199:MET:N	2.36	0.58
1:A:141:LEU:HD23	1:A:143:GLU:N	2.06	0.58
1:A:263:THR:OG1	1:A:264:PRO:HD2	2.03	0.58
1:A:5:TYR:HE2	1:A:76:ILE:CB	1.99	0.58
1:A:147:MET:CE	2:B:1972:LYS:CE	2.81	0.58
2:B:1789:LEU:HD12	2:B:1789:LEU:H	1.66	0.58
1:A:305:GLN:C	1:A:306:PHE:HD1	2.07	0.58
1:A:509:PHE:HB3	1:A:511:TYR:HE1	1.69	0.58
2:B:1813:LYS:CD	2:B:1814:THR:N	2.54	0.58
1:A:242:LEU:HD12	1:A:243:PRO:O	2.04	0.58
1:A:652:PHE:O	1:A:657:THR:O	2.22	0.58
2:B:2248:VAL:O	2:B:2255:MET:HG2	2.03	0.58
2:B:2273:LEU:HD22	2:B:2280:VAL:HB	1.85	0.58
2:B:1925:ILE:O	2:B:1928:THR:OG1	2.22	0.58
2:B:2084:ILE:HD11	2:B:2164:MET:SD	2.44	0.58
2:B:2265:SER:HB3	2:B:2267:ASP:H	1.68	0.58
1:A:79:GLU:HG3	1:A:82:ASP:HB2	1.85	0.57
1:A:658:PHE:C	1:A:659:LYS:HD3	2.24	0.57
2:B:1952:ASN:HB3	2:B:1954:HIS:HE2	1.69	0.57
2:B:2102:ILE:HG21	2:B:2123:LEU:HD22	1.85	0.57
1:A:688:TRP:HE1	2:B:1800:ALA:H	1.50	0.57
5:E:2:NAG:H61	5:E:3:BMA:H2	1.84	0.57
1:A:292:THR:HG23	2:B:1977:ASN:ND2	2.19	0.57
1:A:313:SER:O	1:A:316:GLN:NE2	2.37	0.57
2:B:1863:LEU:CB	2:B:1870:GLN:H	2.14	0.57
2:B:1755:HIS:CD2	2:B:1876:PHE:HD1	2.21	0.57
2:B:1983:PHE:CG	2:B:1984:GLU:N	2.72	0.57
1:A:693:HIS:CD2	1:A:695:SER:HB2	2.40	0.57
2:B:1977:ASN:N	2:B:1977:ASN:OD1	2.36	0.57
1:A:191:THR:OG1	1:A:193:HIS:CG	2.58	0.57
1:A:657:THR:HG1	2:B:1786:TYR:HE2	1.49	0.57
2:B:1755:HIS:HB3	2:B:1931:GLY:O	2.04	0.57
1:A:10:VAL:HG23	1:A:52:VAL:CG2	2.31	0.57
1:A:147:MET:HE3	2:B:1972:LYS:NZ	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:157:SER:HA	1:A:176:LEU:N	2.18	0.57
1:A:409:SER:OG	1:A:413:ASN:OD1	2.12	0.57
1:A:432:THR:HB	1:A:433:ASP:OD1	2.04	0.57
1:A:471:ARG:HB3	1:A:585:TRP:CZ3	2.40	0.57
2:B:1840:ASP:O	2:B:1841:VAL:CB	2.52	0.57
2:B:1979:TYR:O	2:B:1980:PRO:C	2.41	0.57
1:A:492:PRO:HG2	1:A:495:VAL:HG12	1.87	0.57
2:B:1756:LEU:N	2:B:1756:LEU:HD23	2.19	0.57
2:B:2061:ALA:HB2	2:B:2163:ARG:HG3	1.86	0.57
1:A:401:ALA:HB1	1:A:405:ARG:HG3	1.86	0.57
2:B:2030:GLY:HA3	2:B:2293:VAL:HG23	1.87	0.57
2:B:2105:TYR:HA	2:B:2148:TYR:O	2.05	0.57
1:A:57:HIS:CB	1:A:89:LYS:NZ	2.64	0.56
1:A:197:LEU:HD12	1:A:255:TRP:HB3	1.87	0.56
1:A:642:ILE:CG2	1:A:643:GLY:H	2.12	0.56
2:B:1763:ILE:HG23	2:B:1763:ILE:O	2.05	0.56
1:A:65:ARG:CG	1:A:66:PRO:N	2.61	0.56
1:A:97:SER:O	1:A:160:SER:CB	2.54	0.56
1:A:577:SER:O	1:A:616:SER:CB	2.53	0.56
1:A:617:ILE:O	1:A:618:ASN:CB	2.41	0.56
2:B:2072:LYS:HA	2:B:2150:ARG:HA	1.86	0.56
1:A:49:THR:H	1:A:170:SER:HB2	1.71	0.56
1:A:184:LEU:HD23	1:A:187:GLU:HB3	1.86	0.56
1:A:453:LEU:HD21	1:A:533:TYR:CD2	2.37	0.56
1:A:483:VAL:HG13	1:A:513:TRP:CD1	2.40	0.56
1:A:625:LEU:CD1	1:A:706:LEU:HG	2.29	0.56
2:B:1781:ARG:O	2:B:1781:ARG:HG3	2.04	0.56
2:B:1948:GLY:HA3	2:B:1952:ASN:ND2	2.21	0.56
2:B:2021:CYS:O	2:B:2169:CYS:SG	2.63	0.56
1:A:279:ARG:O	1:A:280:ASN:HB3	2.06	0.56
1:A:667:THR:HG23	1:A:668:LEU:HD12	1.88	0.56
2:B:1786:TYR:CA	2:B:1790:ILE:HD12	2.32	0.56
2:B:1940:ILE:CD1	2:B:1990:PRO:HD3	2.35	0.56
2:B:2043:TYR:HB3	2:B:2065:LYS:HG2	1.86	0.56
2:B:2170:ASP:OD1	2:B:2171:LEU:HD12	2.05	0.56
2:B:1749:ARG:HG2	2:B:1749:ARG:NH1	2.21	0.56
1:A:417:GLN:C	1:A:418:ARG:HG2	2.26	0.56
1:A:645:GLN:CD	1:A:645:GLN:H	2.09	0.56
2:B:2200:PHE:CE1	2:B:2215:ARG:HD3	2.40	0.56
2:B:2264:SER:HG	2:B:2301:LEU:HD21	1.64	0.56
1:A:453:LEU:O	1:A:551:LEU:HD12	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:640:LEU:HB3	1:A:677:THR:HB	1.86	0.56
2:B:1709:TYR:CE2	2:B:1924:TYR:HA	2.41	0.56
2:B:1732:LYS:CG	2:B:1849:SER:O	2.51	0.56
2:B:1918:PHE:HA	2:B:1925:ILE:HD12	1.86	0.56
1:A:302:ASP:C	1:A:303:LEU:HD12	2.26	0.56
2:B:2027:MET:HE2	2:B:2032:ILE:HG21	1.88	0.56
2:B:2097:TYR:CE1	2:B:2157:SER:OG	2.58	0.56
1:A:648:PHE:O	1:A:671:PHE:HA	2.05	0.56
2:B:1764:ARG:NH1	2:B:1875:GLU:OE2	2.38	0.56
2:B:1946:SER:HB3	2:B:1978:LEU:CB	2.31	0.56
2:B:2233:ASP:HA	2:B:2305:TYR:CD1	2.41	0.56
1:A:448:ILE:HD13	1:A:618:ASN:O	2.06	0.55
1:A:72:LEU:HD13	1:A:235:ASN:OD1	2.06	0.55
1:A:633:GLU:O	1:A:684:ASN:HB2	2.06	0.55
2:B:1946:SER:CB	2:B:1978:LEU:CD1	2.63	0.55
2:B:2013:LEU:HD22	2:B:2013:LEU:H	1.70	0.55
2:B:2042:GLN:HG3	2:B:2047:ALA:HA	1.88	0.55
1:A:278:VAL:CG1	1:A:296:ALA:HB2	2.35	0.55
1:A:384:HIS:HB3	1:A:386:ILE:CG2	2.36	0.55
2:B:1694:LYS:HG3	2:B:1769:ASP:HB3	1.89	0.55
2:B:1829:GLU:CB	2:B:1966:ARG:CD	2.75	0.55
2:B:1865:PRO:C	2:B:1867:HIS:H	2.07	0.55
1:A:389:GLU:OE1	1:A:429:MET:HE3	2.06	0.55
1:A:457:VAL:HA	1:A:515:VAL:CG1	2.37	0.55
1:A:622:PHE:CE1	1:A:702:MET:C	2.78	0.55
2:B:1826:THR:OG1	2:B:1828:ASP:HB2	2.07	0.55
2:B:1934:MET:CG	2:B:2016:VAL:HB	2.37	0.55
1:A:147:MET:CE	2:B:1972:LYS:HB2	2.36	0.55
1:A:625:LEU:HD13	1:A:706:LEU:HD11	1.53	0.55
1:A:656:TYR:CZ	2:B:1791:SER:CB	2.84	0.55
2:B:1739:THR:HB	2:B:1746:PRO:CG	2.36	0.55
2:B:2259:GLU:HB2	2:B:2312:SER:H	1.70	0.55
1:A:307:LEU:HD12	1:A:322:ALA:O	2.06	0.55
1:A:418:ARG:HH21	1:A:607:GLU:HG2	1.72	0.55
1:A:471:ARG:CB	1:A:585:TRP:CZ3	2.90	0.55
1:A:538:ASN:ND2	1:A:541:ARG:HB3	2.21	0.55
2:B:2023:THR:OG1	2:B:2024:PRO:HD2	2.06	0.55
2:B:2302:LEU:HD22	2:B:2302:LEU:H	1.71	0.55
2:B:1709:TYR:HE2	2:B:1924:TYR:HA	1.71	0.55
2:B:2042:GLN:HE21	2:B:2047:ALA:CB	2.20	0.55
2:B:1864:ASN:HB3	2:B:1867:HIS:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1976:TYR:CE2	2:B:1984:GLU:CD	2.80	0.55
2:B:2246:GLN:OE1	2:B:2320:ARG:HB2	2.06	0.55
1:A:164:LEU:O	1:A:167:ASP:O	2.25	0.55
1:A:673:PHE:O	1:A:674:SER:HB2	2.06	0.55
2:B:1733:VAL:O	2:B:1850:GLY:C	2.45	0.55
2:B:1796:GLN:O	2:B:1797:ARG:HB3	2.07	0.55
1:A:660:HIS:HB2	1:A:680:MET:HG3	1.89	0.55
1:A:237:TYR:CZ	1:A:242:LEU:HB2	2.42	0.54
1:A:457:VAL:HA	1:A:515:VAL:HG12	1.88	0.54
2:B:2027:MET:HE2	2:B:2032:ILE:HD13	1.89	0.54
2:B:2046:TRP:CZ3	2:B:2059:ILE:CB	2.89	0.54
1:A:536:PHE:CD1	1:A:536:PHE:N	2.75	0.54
1:A:664:TYR:HE1	2:B:1826:THR:N	2.05	0.54
2:B:1732:LYS:NZ	2:B:1918:PHE:HE2	2.04	0.54
1:A:3:ARG:HH22	1:A:79:GLU:CD	2.11	0.54
1:A:172:LEU:N	1:A:172:LEU:HD12	2.22	0.54
1:A:475:ILE:O	1:A:475:ILE:CG2	2.56	0.54
1:A:495:VAL:CG2	1:A:496:LYS:N	2.70	0.54
2:B:1735:PHE:CE1	2:B:1851:LEU:CB	2.90	0.54
2:B:1975:LEU:N	2:B:1975:LEU:HD23	2.22	0.54
1:A:393:TRP:HA	1:A:393:TRP:CE3	2.43	0.54
1:A:660:HIS:ND1	1:A:680:MET:CE	2.71	0.54
2:B:1705:ARG:NH2	2:B:1707:TRP:HZ3	2.05	0.54
2:B:2026:GLY:O	2:B:2032:ILE:HB	2.07	0.54
1:A:168:LEU:H	1:A:172:LEU:HB2	1.71	0.54
1:A:100:ALA:CB	1:A:138:TRP:CE3	2.90	0.54
1:A:269:ILE:HD12	1:A:288:ILE:HG21	1.89	0.54
1:A:503:ILE:HG21	1:A:537:VAL:HG13	1.88	0.54
1:A:640:LEU:HB3	1:A:677:THR:CB	2.38	0.54
2:B:2245:THR:C	2:B:2286:ASN:ND2	2.56	0.54
2:B:2273:LEU:HD22	2:B:2280:VAL:CG2	2.36	0.54
1:A:640:LEU:HB2	1:A:677:THR:HB	1.89	0.54
2:B:1833:LYS:HG3	2:B:1834:ALA:H	1.73	0.54
2:B:1840:ASP:O	2:B:1841:VAL:HB	2.07	0.54
3:C:3:BMA:C6	3:C:4:MAN:H5	2.38	0.54
1:A:111:GLY:O	1:A:161:HIS:HB3	2.07	0.54
1:A:688:TRP:HZ2	2:B:1799:GLY:HA2	1.73	0.54
2:B:1953:ILE:HD12	2:B:1953:ILE:N	2.23	0.54
2:B:2180:MET:CE	2:B:2232:VAL:HG11	2.38	0.54
1:A:398:LEU:HD23	1:A:399:VAL:H	1.73	0.54
1:A:662:MET:O	1:A:663:VAL:HG23	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1890:TYR:O	2:B:1894:ASN:N	2.22	0.54
2:B:2070:TRP:CE3	2:B:2150:ARG:HD2	2.43	0.54
2:B:2156:TYR:HB2	2:B:2159:ARG:O	2.08	0.54
1:A:425:LYS:NZ	1:A:581:GLU:OE1	2.41	0.53
1:A:492:PRO:O	1:A:494:GLY:N	2.33	0.53
2:B:1830:PHE:CZ	2:B:1987:GLU:HG3	2.44	0.53
2:B:1963:PHE:HB2	2:B:1986:VAL:HG11	1.89	0.53
1:A:426:VAL:HG22	1:A:586:TYR:HE1	1.73	0.53
2:B:2023:THR:HB	2:B:2176:MET:CE	2.38	0.53
2:B:2200:PHE:O	2:B:2202:THR:HG23	2.08	0.53
1:A:114:TYR:CE2	2:B:1997:ARG:CB	2.62	0.53
1:A:536:PHE:N	1:A:536:PHE:HD1	2.06	0.53
2:B:1830:PHE:HE2	2:B:1986:VAL:HA	1.74	0.53
2:B:2039:ALA:HB2	2:B:2048:PRO:CG	2.31	0.53
2:B:2064:THR:OG1	2:B:2065:LYS:N	2.39	0.53
2:B:2274:PHE:CD1	2:B:2275:PHE:N	2.76	0.53
1:A:148:ALA:CA	1:A:180:ARG:HH21	2.19	0.53
1:A:267:HIS:HA	1:A:312:ILE:HD11	1.90	0.53
1:A:426:VAL:HG22	1:A:586:TYR:CE1	2.43	0.53
1:A:428:PHE:CE2	1:A:475:ILE:CG1	2.90	0.53
1:A:65:ARG:HB3	1:A:66:PRO:HD3	1.87	0.53
1:A:242:LEU:HD12	1:A:243:PRO:N	2.24	0.53
1:A:465:PHE:CD1	1:A:466:LYS:N	2.77	0.53
2:B:1699:PHE:CD1	2:B:1740:ASP:OD1	2.61	0.53
2:B:1884:ASP:HA	2:B:1917:ARG:HG2	1.91	0.53
2:B:2013:LEU:N	2:B:2013:LEU:CD2	2.72	0.53
1:A:99:HIS:HD2	1:A:161:HIS:ND1	2.06	0.53
2:B:2190:ILE:HG12	2:B:2232:VAL:HG12	1.90	0.53
1:A:385:TYR:CE1	1:A:436:PHE:HB3	2.44	0.53
1:A:527:ARG:HD2	1:A:527:ARG:N	2.23	0.53
2:B:1830:PHE:HD2	2:B:1985:THR:OG1	1.90	0.53
2:B:1870:GLN:HG3	2:B:1871:VAL:H	1.74	0.53
2:B:1976:TYR:CE2	2:B:1984:GLU:OE1	2.62	0.53
1:A:688:TRP:NE1	2:B:1799:GLY:HA2	2.24	0.53
1:A:498:LEU:H	1:A:498:LEU:CD1	2.10	0.53
1:A:578:VAL:HG23	1:A:644:ALA:H	1.73	0.53
2:B:2196:PHE:HD1	2:B:2222:GLN:O	1.92	0.53
2:B:2275:PHE:HA	2:B:2280:VAL:HA	1.91	0.53
2:B:1973:MET:HE3	2:B:1976:TYR:CB	2.34	0.53
2:B:2027:MET:CA	2:B:2032:ILE:HD12	2.39	0.53
1:A:80:VAL:O	1:A:81:TYR:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:670:LEU:HD12	1:A:671:PHE:N	2.16	0.52
2:B:1755:HIS:CE1	2:B:1756:LEU:CD2	2.92	0.52
2:B:2210:LEU:HG	2:B:2211:HIS:ND1	2.24	0.52
2:B:2244:THR:OG1	2:B:2322:GLU:HB3	2.09	0.52
1:A:99:HIS:ND1	1:A:100:ALA:N	2.56	0.52
1:A:308:LEU:HG	1:A:322:ALA:O	2.09	0.52
1:A:673:PHE:O	1:A:674:SER:CB	2.56	0.52
2:B:1946:SER:CA	2:B:1978:LEU:HD12	2.40	0.52
2:B:1995:ILE:N	2:B:1995:ILE:HD13	2.24	0.52
2:B:2081:ILE:HA	2:B:2168:GLY:CA	2.39	0.52
2:B:2304:ARG:HD2	2:B:2305:TYR:CZ	2.44	0.52
1:A:168:LEU:HA	1:A:172:LEU:HB2	1.91	0.52
1:A:249:HIS:O	1:A:300:LEU:O	2.26	0.52
1:A:393:TRP:HA	1:A:393:TRP:HE3	1.75	0.52
1:A:484:ARG:HH11	1:A:486:LEU:HA	1.74	0.52
2:B:2087:GLN:N	2:B:2163:ARG:O	2.42	0.52
1:A:308:LEU:HD12	1:A:308:LEU:C	2.30	0.52
2:B:1855:LEU:HD23	2:B:1856:LEU:N	2.25	0.52
2:B:2226:PRO:O	2:B:2310:PRO:O	2.26	0.52
2:B:2261:LEU:HD21	2:B:2281:LYS:O	2.09	0.52
2:B:2281:LYS:HD3	2:B:2282:VAL:N	2.25	0.52
1:A:14:TRP:N	1:A:46:TYR:O	2.43	0.52
1:A:527:ARG:O	1:A:528:CYS:HB2	2.09	0.52
1:A:576:PHE:HE2	1:A:650:SER:HB3	1.74	0.52
1:A:580:ASP:C	1:A:582:ASN:H	2.13	0.52
2:B:1732:LYS:HB3	2:B:1849:SER:O	2.10	0.52
2:B:1932:LEU:CB	2:B:2014:PHE:HA	2.40	0.52
2:B:2273:LEU:HD21	2:B:2280:VAL:HG23	1.73	0.52
1:A:278:VAL:HG12	1:A:296:ALA:CB	2.38	0.52
1:A:398:LEU:CG	1:A:399:VAL:H	2.22	0.52
2:B:1932:LEU:HB3	2:B:2014:PHE:HA	1.91	0.52
2:B:2261:LEU:CD2	2:B:2281:LYS:O	2.58	0.52
2:B:2262:ILE:HD11	2:B:2283:PHE:CD1	2.45	0.52
1:A:155:THR:HG21	1:A:256:HIS:HA	1.90	0.52
1:A:501:PHE:O	1:A:503:ILE:N	2.42	0.52
1:A:622:PHE:O	1:A:623:ASP:OD1	2.28	0.52
1:A:65:ARG:HB3	1:A:66:PRO:HD2	1.92	0.52
1:A:156:TYR:HA	1:A:293:PHE:CD2	2.45	0.52
1:A:396:ALA:CB	1:A:397:PRO:HA	2.24	0.52
2:B:1769:ASP:OD1	2:B:1769:ASP:N	2.32	0.52
2:B:2048:PRO:HG3	2:B:2062:TRP:CG	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2264:SER:HB3	2:B:2301:LEU:HD22	1.91	0.52
1:A:438:THR:OG1	1:A:439:ARG:N	2.43	0.51
1:A:111:GLY:HA2	1:A:126:ASP:HA	1.91	0.51
1:A:654:SER:H	1:A:657:THR:HA	1.75	0.51
2:B:1829:GLU:CB	2:B:1966:ARG:HH11	2.22	0.51
2:B:1834:ALA:HB1	2:B:1945:LEU:HD11	1.91	0.51
1:A:51:PHE:CD2	1:A:158:TYR:HE1	2.28	0.51
2:B:2260:PHE:O	2:B:2283:PHE:HB2	2.11	0.51
1:A:14:TRP:CE2	1:A:71:LEU:CD1	2.93	0.51
1:A:237:TYR:CG	1:A:242:LEU:CB	2.90	0.51
1:A:656:TYR:CE1	2:B:1791:SER:CB	2.90	0.51
1:A:656:TYR:CD1	2:B:1791:SER:HB2	2.45	0.51
2:B:1704:GLU:HG2	2:B:1731:LYS:HE2	1.91	0.51
2:B:1766:GLU:CD	2:B:1860:THR:O	2.49	0.51
2:B:1975:LEU:HD23	2:B:1975:LEU:H	1.75	0.51
2:B:1733:VAL:H	2:B:1850:GLY:HA2	1.75	0.51
2:B:1840:ASP:O	2:B:1841:VAL:CG2	2.58	0.51
2:B:1983:PHE:CD1	2:B:1984:GLU:CA	2.93	0.51
2:B:2052:ARG:HH11	2:B:2165:GLU:HG3	1.76	0.51
2:B:2104:MET:HA	2:B:2113:GLN:O	2.11	0.51
1:A:80:VAL:HA	1:A:140:VAL:HG11	1.92	0.51
1:A:97:SER:O	1:A:160:SER:HA	2.11	0.51
1:A:274:HIS:HE2	1:A:306:PHE:HE2	1.59	0.51
1:A:496:LYS:O	1:A:500:ASP:HB2	2.09	0.51
1:A:528:CYS:HA	1:A:553:ILE:O	2.11	0.51
1:A:658:PHE:HZ	1:A:684:ASN:ND2	2.07	0.51
2:B:2129:ASN:CB	2:B:2134:GLY:HA3	2.41	0.51
1:A:162:VAL:HG23	1:A:167:ASP:OD2	2.11	0.51
1:A:272:GLU:CB	1:A:307:LEU:H	2.24	0.51
2:B:2171:LEU:HD12	2:B:2171:LEU:H	1.75	0.51
2:B:2322:GLU:HG3	2:B:2323:VAL:N	2.26	0.51
2:B:1889:TRP:CE3	2:B:1890:TYR:N	2.79	0.51
1:A:526:PRO:C	1:A:679:PHE:HZ	2.14	0.51
1:A:631:LEU:CD2	1:A:632:HIS:ND1	2.71	0.51
2:B:1952:ASN:HB3	2:B:1954:HIS:CD2	2.45	0.51
1:A:147:MET:CE	2:B:1972:LYS:NZ	2.74	0.51
1:A:199:PHE:CD1	1:A:269:ILE:HD13	2.46	0.51
1:A:625:LEU:O	1:A:627:LEU:N	2.39	0.51
1:A:461:LEU:HD22	1:A:513:TRP:CE3	2.46	0.50
1:A:581:GLU:O	1:A:584:SER:HB3	2.11	0.50
1:A:687:LEU:HA	1:A:710:SER:OG	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1787:SER:H	2:B:1790:ILE:HG13	1.75	0.50
2:B:2063:SER:OG	2:B:2161:THR:HB	2.11	0.50
1:A:271:LEU:HA	1:A:308:LEU:HA	1.92	0.50
1:A:501:PHE:O	1:A:502:PRO:C	2.47	0.50
1:A:679:PHE:CD1	1:A:679:PHE:N	2.78	0.50
2:B:1707:TRP:HA	2:B:1707:TRP:HE3	1.72	0.50
2:B:1795:ASP:CG	2:B:1800:ALA:HB2	2.32	0.50
2:B:2186:SER:HB2	2:B:2189:GLN:HG3	1.93	0.50
2:B:2195:TYR:HA	2:B:2220:ARG:O	2.11	0.50
1:A:688:TRP:HZ2	2:B:1799:GLY:CA	2.23	0.50
2:B:2062:TRP:CZ3	2:B:2071:ILE:HB	2.47	0.50
1:A:87:THR:HG22	1:A:135:THR:OG1	2.11	0.50
1:A:94:HIS:HD2	1:A:95:PRO:HD2	1.77	0.50
1:A:137:VAL:HG11	2:B:2329:GLN:HE22	1.76	0.50
1:A:417:GLN:NE2	1:A:602:GLN:HB2	2.26	0.50
1:A:509:PHE:HD1	1:A:510:LYS:N	2.08	0.50
1:A:631:LEU:HD23	1:A:631:LEU:C	2.31	0.50
2:B:2331:LEU:HD23	2:B:2331:LEU:N	2.26	0.50
1:A:2:THR:HB	1:A:82:ASP:OD2	2.11	0.50
1:A:105:TYR:HD2	1:A:110:GLU:HB3	1.71	0.50
1:A:106:TRP:CZ3	2:B:2329:GLN:HB3	2.46	0.50
1:A:206:LYS:O	1:A:207:SER:HB3	2.12	0.50
2:B:1808:LYS:O	2:B:1811:GLU:HB2	2.12	0.50
2:B:1983:PHE:O	2:B:1984:GLU:CB	2.52	0.50
1:A:270:PHE:O	1:A:308:LEU:HA	2.11	0.50
1:A:617:ILE:CG1	1:A:706:LEU:HD22	2.40	0.50
1:A:654:SER:HB2	1:A:690:LEU:HD12	1.93	0.50
1:A:688:TRP:CZ2	2:B:1799:GLY:CA	2.94	0.50
2:B:2052:ARG:HD3	2:B:2165:GLU:CG	2.42	0.50
2:B:2265:SER:OG	2:B:2271:TRP:CE3	2.61	0.50
1:A:616:SER:OG	1:A:617:ILE:N	2.45	0.50
2:B:1752:LEU:HD12	2:B:1752:LEU:N	2.27	0.50
1:A:121:ARG:HG3	1:A:121:ARG:NH1	2.24	0.50
2:B:1830:PHE:CE1	2:B:1966:ARG:CZ	2.95	0.50
2:B:1877:ALA:HA	2:B:1943:TYR:HB2	1.93	0.50
2:B:1947:MET:HE3	2:B:1948:GLY:N	2.24	0.50
2:B:2042:GLN:HB3	2:B:2062:TRP:NE1	2.26	0.50
2:B:2046:TRP:CD1	2:B:2159:ARG:NH2	2.79	0.50
1:A:578:VAL:CG2	1:A:644:ALA:H	2.25	0.50
2:B:1908:GLU:O	2:B:1909:ASP:OD1	2.30	0.50
2:B:1941:ARG:HD2	2:B:1943:TYR:OH	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2:NAG:O3	3:C:3:BMA:O6	2.30	0.50
1:A:5:TYR:CD2	1:A:76:ILE:HB	2.36	0.49
1:A:158:TYR:CZ	1:A:174:GLY:HA3	2.47	0.49
1:A:527:ARG:O	1:A:679:PHE:CE2	2.65	0.49
1:A:647:ASP:CG	2:B:1950:ASN:HD21	2.15	0.49
1:A:232:HIS:CD2	1:A:318:ASP:CB	2.95	0.49
1:A:299:LEU:H	1:A:299:LEU:HD23	1.77	0.49
1:A:316:GLN:CD	1:A:316:GLN:H	2.15	0.49
1:A:480:ILE:CG2	1:A:481:THR:N	2.70	0.49
1:A:624:SER:O	1:A:625:LEU:HD12	2.12	0.49
1:A:653:PHE:HB2	1:A:693:HIS:CE1	2.42	0.49
1:A:687:LEU:CD1	1:A:688:TRP:H	2.25	0.49
2:B:2220:ARG:HH11	2:B:2220:ARG:CG	2.25	0.49
1:A:626:GLN:HA	1:A:707:LYS:HB2	1.93	0.49
1:A:656:TYR:HB2	1:A:686:GLY:C	2.32	0.49
1:A:107:LYS:O	1:A:126:ASP:OD1	2.30	0.49
1:A:392:ASP:HA	1:A:424:LYS:HA	1.94	0.49
2:B:2083:GLY:HA2	2:B:2140:PHE:CE2	2.44	0.49
2:B:2195:TYR:HD2	2:B:2204:SER:HA	1.76	0.49
1:A:57:HIS:O	1:A:58:LEU:CG	2.61	0.49
1:A:267:HIS:HB2	1:A:288:ILE:HG23	1.95	0.49
1:A:386:ILE:O	1:A:465:PHE:HA	2.13	0.49
1:A:626:GLN:C	1:A:627:LEU:HD12	2.32	0.49
2:B:1807:VAL:HG13	2:B:1811:GLU:HB3	1.94	0.49
1:A:100:ALA:HB3	1:A:105:TYR:CE1	2.48	0.49
2:B:1828:ASP:OD2	2:B:1968:LYS:C	2.51	0.49
2:B:2210:LEU:HD13	2:B:2321:MET:HA	1.94	0.49
1:A:10:VAL:HB	1:A:52:VAL:HG11	1.95	0.49
1:A:319:GLY:O	1:A:320:MET:HB2	2.12	0.49
2:B:1735:PHE:CE1	2:B:1851:LEU:HG	2.40	0.49
2:B:2230:LEU:O	2:B:2308:ILE:HG22	2.11	0.49
1:A:137:VAL:HG11	2:B:2329:GLN:NE2	2.27	0.49
1:A:249:HIS:CE1	1:A:303:LEU:CD1	2.96	0.49
1:A:423:TYR:CD2	1:A:581:GLU:HG3	2.47	0.49
1:A:700:ARG:HH11	2:B:1843:LEU:HB3	1.77	0.49
2:B:2105:TYR:HB2	2:B:2146:ALA:CB	2.43	0.49
2:B:2144:ILE:HG22	2:B:2145:ILE:N	2.27	0.49
2:B:2275:PHE:CD1	2:B:2275:PHE:N	2.81	0.49
1:A:101:VAL:O	1:A:101:VAL:HG13	2.13	0.49
1:A:663:VAL:HG13	2:B:1968:LYS:HD2	1.95	0.49
1:A:688:TRP:HE1	2:B:1799:GLY:CA	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:95:PRO:HB3	1:A:130:PRO:HD3	1.94	0.49
1:A:660:HIS:HB3	1:A:682:MET:HG3	1.95	0.49
1:A:688:TRP:CD1	2:B:1800:ALA:HB3	2.48	0.49
2:B:1838:PHE:CE1	2:B:1852:ILE:HG13	2.48	0.49
2:B:1946:SER:CB	2:B:1978:LEU:CB	2.86	0.48
2:B:1968:LYS:O	2:B:1969:GLU:HG2	2.13	0.48
2:B:2325:GLY:C	2:B:2326:CYS:SG	2.91	0.48
1:A:472:PRO:HB2	1:A:503:ILE:HB	1.96	0.48
1:A:655:GLY:HA3	1:A:687:LEU:HB3	1.95	0.48
2:B:1755:HIS:ND1	2:B:1756:LEU:HD23	2.28	0.48
2:B:1779:ALA:O	2:B:1809:PRO:HG3	2.13	0.48
2:B:1924:TYR:HD1	2:B:1928:THR:HB	1.78	0.48
2:B:1996:TRP:HB2	2:B:2014:PHE:CE1	2.48	0.48
2:B:2330:ASP:C	2:B:2331:LEU:HD23	2.33	0.48
1:A:186:LYS:O	1:A:189:THR:N	2.46	0.48
1:A:200:ALA:CB	1:A:202:PHE:CE1	2.96	0.48
1:A:433:ASP:OD1	1:A:433:ASP:N	2.46	0.48
1:A:249:HIS:NE2	1:A:303:LEU:CD1	2.71	0.48
1:A:282:ARG:HH12	1:A:299:LEU:CD2	2.26	0.48
1:A:473:TYR:HA	1:A:537:VAL:HG21	1.95	0.48
2:B:1873:VAL:HG21	2:B:1941:ARG:NH2	2.29	0.48
2:B:1944:LEU:HD23	2:B:1944:LEU:N	2.28	0.48
2:B:2027:MET:HE3	2:B:2032:ILE:HD13	1.93	0.48
1:A:653:PHE:HB3	1:A:691:GLY:O	2.13	0.48
2:B:2106:SER:O	2:B:2146:ALA:HB1	2.13	0.48
1:A:13:SER:HB3	1:A:47:LYS:HG2	1.95	0.48
1:A:249:HIS:CE1	1:A:303:LEU:HD12	2.48	0.48
1:A:542:ASP:O	1:A:543:LEU:C	2.52	0.48
1:A:621:VAL:CG1	1:A:622:PHE:H	1.90	0.48
1:A:657:THR:CG2	2:B:1788:SER:HA	2.18	0.48
2:B:1732:LYS:NZ	2:B:1918:PHE:CE2	2.80	0.48
2:B:2087:GLN:HG2	2:B:2163:ARG:HB2	1.94	0.48
2:B:2246:GLN:OE1	2:B:2320:ARG:NE	2.46	0.48
2:B:2331:LEU:O	2:B:2332:TYR:CB	2.62	0.48
1:A:237:TYR:HD2	1:A:241:SER:HB2	1.79	0.48
1:A:473:TYR:O	1:A:504:LEU:HD12	2.12	0.48
1:A:664:TYR:CD1	2:B:1826:THR:CG2	2.95	0.48
1:A:471:ARG:CB	1:A:585:TRP:CE3	2.97	0.48
1:A:518:GLU:H	1:A:518:GLU:CD	2.18	0.48
1:A:586:TYR:O	1:A:590:ASN:ND2	2.47	0.48
2:B:1735:PHE:HE1	2:B:1851:LEU:CB	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2101:PHE:HD2	2:B:2151:LEU:HG	1.78	0.48
2:B:2025:LEU:HD12	2:B:2166:LEU:HD12	1.96	0.48
1:A:51:PHE:CE1	1:A:172:LEU:HA	2.49	0.47
1:A:237:TYR:CD2	1:A:242:LEU:CB	2.96	0.47
1:A:659:LYS:HE2	2:B:1822:HIS:CD2	2.49	0.47
1:A:670:LEU:CD1	1:A:671:PHE:H	2.19	0.47
1:A:84:VAL:HG23	1:A:138:TRP:CD1	2.49	0.47
1:A:653:PHE:O	1:A:690:LEU:HA	2.14	0.47
2:B:1766:GLU:HB3	2:B:1769:ASP:OD1	2.14	0.47
2:B:2238:MET:CE	2:B:2326:CYS:O	2.62	0.47
1:A:311:HIS:O	1:A:312:ILE:CG1	2.59	0.47
1:A:398:LEU:HG	1:A:399:VAL:H	1.79	0.47
1:A:542:ASP:O	1:A:545:SER:HB2	2.15	0.47
1:A:676:GLU:OE1	1:A:676:GLU:HA	2.14	0.47
2:B:1709:TYR:CD1	2:B:1709:TYR:N	2.81	0.47
2:B:1732:LYS:CB	2:B:1849:SER:O	2.62	0.47
2:B:1936:GLN:HG2	2:B:1937:ASP:OD1	2.15	0.47
2:B:2087:GLN:HB3	2:B:2163:ARG:CA	2.44	0.47
1:A:163:ASP:HA	2:B:2007:HIS:NE2	2.29	0.47
2:B:2329:GLN:CG	2:B:2332:TYR:O	2.37	0.47
1:A:664:TYR:OH	2:B:1825:PRO:CA	2.62	0.47
1:A:712:ASP:O	1:A:713:LYS:HG2	2.14	0.47
2:B:1830:PHE:HE1	2:B:1966:ARG:NH2	2.12	0.47
2:B:1888:SER:OG	2:B:1889:TRP:N	2.46	0.47
2:B:2178:LEU:O	2:B:2185:ILE:HD12	2.14	0.47
1:A:380:LYS:CG	1:A:382:TRP:HZ3	2.27	0.47
1:A:471:ARG:N	1:A:471:ARG:HD3	2.30	0.47
1:A:654:SER:CB	1:A:690:LEU:HB2	2.45	0.47
1:A:661:LYS:HA	1:A:665:GLU:HA	1.97	0.47
2:B:1963:PHE:CB	2:B:1986:VAL:HG11	2.45	0.47
2:B:2027:MET:CB	2:B:2165:GLU:HG2	2.42	0.47
2:B:2052:ARG:HA	2:B:2163:ARG:HB3	1.95	0.47
2:B:2265:SER:O	2:B:2303:THR:HB	2.14	0.47
1:A:116:ASP:O	2:B:1995:ILE:HG13	2.15	0.47
1:A:432:THR:OG1	1:A:440:GLU:CG	2.62	0.47
1:A:663:VAL:CG1	2:B:1968:LYS:HD2	2.45	0.47
1:A:663:VAL:HG11	2:B:1968:LYS:HB2	1.95	0.47
1:A:693:HIS:HD2	1:A:695:SER:HB2	1.77	0.47
2:B:1739:THR:H	2:B:1746:PRO:CG	2.24	0.47
2:B:1969:GLU:HA	2:B:1969:GLU:OE1	2.15	0.47
2:B:1996:TRP:O	2:B:2013:LEU:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2046:TRP:O	2:B:2062:TRP:HA	2.15	0.47
2:B:2054:HIS:O	2:B:2060:ASN:HB2	2.13	0.47
2:B:2105:TYR:HB2	2:B:2146:ALA:HB3	1.97	0.47
2:B:2231:GLN:HA	2:B:2306:LEU:O	2.14	0.47
1:A:127:LYS:CG	1:A:162:VAL:HG11	2.42	0.47
1:A:645:GLN:O	1:A:646:THR:HB	2.15	0.47
2:B:1785:PHE:HB3	2:B:1815:TYR:HE2	1.79	0.47
1:A:65:ARG:O	1:A:66:PRO:C	2.53	0.47
1:A:455:GLY:O	1:A:554:CYS:N	2.47	0.47
1:A:617:ILE:CG1	1:A:706:LEU:HD13	2.44	0.47
2:B:1889:TRP:CE3	2:B:1890:TYR:HB2	2.48	0.47
2:B:2083:GLY:N	2:B:2140:PHE:HD2	2.13	0.47
2:B:2156:TYR:HD2	2:B:2159:ARG:C	2.18	0.47
1:A:89:LYS:HA	1:A:133:SER:HA	1.97	0.46
1:A:278:VAL:CG2	1:A:279:ARG:H	2.24	0.46
1:A:663:VAL:HG13	2:B:1968:LYS:CB	2.41	0.46
2:B:1789:LEU:HD23	2:B:1823:MET:SD	2.54	0.46
1:A:398:LEU:CD2	1:A:399:VAL:H	2.28	0.46
1:A:576:PHE:HE2	1:A:650:SER:CB	2.28	0.46
1:A:607:GLU:O	1:A:611:SER:OG	2.32	0.46
2:B:2265:SER:OG	2:B:2270:GLN:O	2.33	0.46
2:B:1975:LEU:HD23	2:B:1975:LEU:O	2.15	0.46
1:A:182:GLY:O	1:A:186:LYS:CE	2.59	0.46
1:A:396:ALA:CB	1:A:397:PRO:CA	2.90	0.46
1:A:578:VAL:H	1:A:643:GLY:HA3	1.81	0.46
1:A:684:ASN:C	1:A:686:GLY:H	2.13	0.46
2:B:2265:SER:OG	2:B:2271:TRP:HA	2.16	0.46
2:B:2273:LEU:O	2:B:2275:PHE:HD1	1.93	0.46
3:C:1:NAG:O3	3:C:2:NAG:H62	2.15	0.46
1:A:486:LEU:CD2	1:A:487:TYR:CD2	2.98	0.46
1:A:534:SER:OG	1:A:535:SER:N	2.49	0.46
1:A:652:PHE:HD1	1:A:690:LEU:HD11	1.80	0.46
1:A:697:PHE:CD1	1:A:698:ARG:HB2	2.51	0.46
2:B:1771:ILE:HB	2:B:1817:TRP:NE1	2.31	0.46
2:B:2080:ILE:O	2:B:2080:ILE:HG13	2.15	0.46
1:A:181:GLU:HG3	1:A:182:GLY:N	2.30	0.46
2:B:1711:MET:SD	2:B:1711:MET:N	2.89	0.46
2:B:1882:ILE:HD11	2:B:1919:HIS:CE1	2.50	0.46
2:B:1947:MET:O	2:B:1952:ASN:ND2	2.48	0.46
2:B:2101:PHE:CE2	2:B:2103:ILE:HD11	2.50	0.46
2:B:2132:SER:O	2:B:2133:SER:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2179:GLY:HA2	2:B:2184:ALA:HB3	1.98	0.46
2:B:1751:GLU:OE1	2:B:2105:TYR:OH	2.34	0.46
1:A:667:THR:C	1:A:669:THR:N	2.68	0.46
2:B:1758:LEU:HD12	2:B:1922:ASN:O	2.14	0.46
1:A:13:SER:HA	1:A:47:LYS:HA	1.97	0.46
1:A:303:LEU:HA	1:A:326:VAL:HG13	1.97	0.46
1:A:305:GLN:HG2	1:A:325:LYS:HG2	1.98	0.46
1:A:486:LEU:HD22	1:A:487:TYR:CD2	2.51	0.46
2:B:1705:ARG:HG2	2:B:1706:LEU:N	2.29	0.46
2:B:1797:ARG:O	2:B:1797:ARG:HD3	2.16	0.46
2:B:1821:HIS:O	2:B:1824:ALA:HB3	2.16	0.46
2:B:1886:THR:HG23	2:B:1887:LYS:HD2	1.98	0.46
1:A:80:VAL:HA	1:A:140:VAL:HG12	1.98	0.46
1:A:147:MET:HE1	2:B:1972:LYS:HZ2	1.81	0.46
1:A:398:LEU:HD23	1:A:399:VAL:N	2.31	0.46
2:B:2097:TYR:CE1	2:B:2130:VAL:HA	2.51	0.46
2:B:2105:TYR:HD2	2:B:2146:ALA:HB2	1.80	0.46
2:B:2212:LEU:O	2:B:2217:ASN:HB2	2.16	0.46
1:A:278:VAL:CG2	1:A:279:ARG:N	2.79	0.45
1:A:421:ARG:HG2	1:A:422:LYS:N	2.31	0.45
1:A:684:ASN:N	1:A:685:PRO:CD	2.79	0.45
2:B:2156:TYR:CD1	2:B:2156:TYR:N	2.83	0.45
2:B:2262:ILE:HG22	2:B:2306:LEU:HD21	1.97	0.45
1:A:198:LEU:H	1:A:235:ASN:HD22	1.63	0.45
1:A:200:ALA:HB3	1:A:202:PHE:CE1	2.51	0.45
1:A:426:VAL:HG11	1:A:473:TYR:HE2	1.80	0.45
1:A:473:TYR:O	1:A:504:LEU:HD11	2.16	0.45
1:A:688:TRP:HE1	2:B:1799:GLY:HA2	1.81	0.45
2:B:1771:ILE:O	2:B:1816:PHE:HA	2.16	0.45
2:B:2033:ARG:H	2:B:2036:GLN:NE2	2.14	0.45
1:A:137:VAL:O	1:A:137:VAL:HG13	2.16	0.45
1:A:184:LEU:HD23	1:A:184:LEU:O	2.16	0.45
1:A:187:GLU:HA	1:A:190:GLN:CB	2.33	0.45
1:A:288:ILE:HG23	1:A:288:ILE:O	2.16	0.45
1:A:595:LEU:HD11	1:A:601:VAL:HG21	1.98	0.45
2:B:1755:HIS:CE1	2:B:1756:LEU:HD23	2.51	0.45
2:B:1935:ALA:HB2	2:B:2017:TYR:CZ	2.52	0.45
2:B:2263:SER:HB2	2:B:2307:ARG:CB	2.46	0.45
1:A:576:PHE:N	1:A:640:LEU:O	2.49	0.45
1:A:668:LEU:HG	2:B:1788:SER:HG	1.81	0.45
2:B:1737:GLU:HG2	2:B:1761:PRO:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2286:ASN:H	2:B:2293:VAL:HG11	1.82	0.45
1:A:463:ILE:N	1:A:463:ILE:HD12	2.31	0.45
1:A:501:PHE:O	1:A:503:ILE:CG1	2.52	0.45
2:B:1889:TRP:HB3	2:B:1893:GLU:HG3	1.98	0.45
2:B:1963:PHE:CD1	2:B:1986:VAL:CG1	2.84	0.45
1:A:237:TYR:CD1	1:A:242:LEU:CB	3.00	0.45
1:A:577:SER:O	1:A:616:SER:OG	2.35	0.45
2:B:1708:ASP:C	2:B:1709:TYR:CD1	2.90	0.45
2:B:1755:HIS:CE1	2:B:1756:LEU:HD21	2.52	0.45
2:B:1834:ALA:HB3	2:B:1983:PHE:CD1	2.51	0.45
2:B:2080:ILE:HD12	2:B:2082:HIS:NE2	2.31	0.45
1:A:419:ILE:HG22	1:A:594:PHE:HB2	1.98	0.45
2:B:1975:LEU:N	2:B:1975:LEU:CD2	2.79	0.45
2:B:2028:ALA:HB2	2:B:2052:ARG:HH11	1.82	0.45
1:A:163:ASP:HA	2:B:2007:HIS:CE1	2.52	0.45
1:A:184:LEU:O	1:A:187:GLU:N	2.48	0.45
1:A:453:LEU:CD2	1:A:533:TYR:HE2	2.15	0.45
1:A:548:ILE:HG13	1:A:549:GLY:N	2.32	0.45
1:A:604:GLU:HA	1:A:608:PHE:CZ	2.52	0.45
1:A:651:VAL:CG1	1:A:652:PHE:N	2.80	0.45
1:A:688:TRP:HZ2	2:B:1799:GLY:H	1.63	0.45
2:B:1735:PHE:CE1	2:B:1851:LEU:CD2	3.00	0.45
2:B:2046:TRP:CH2	2:B:2058:SER:C	2.88	0.45
2:B:2048:PRO:O	2:B:2049:LYS:CB	2.65	0.45
2:B:2244:THR:HG22	2:B:2294:VAL:HB	1.99	0.45
2:B:2273:LEU:HD22	2:B:2280:VAL:CB	2.47	0.45
1:A:184:LEU:O	1:A:185:ALA:C	2.53	0.45
1:A:267:HIS:CE1	1:A:320:MET:HG3	2.52	0.45
1:A:499:LYS:O	1:A:536:PHE:O	2.35	0.45
1:A:610:ALA:HA	1:A:613:ILE:HG12	1.99	0.45
2:B:1789:LEU:O	2:B:1791:SER:N	2.50	0.45
2:B:1868:GLY:O	2:B:1869:ARG:HG3	2.16	0.45
2:B:2157:SER:C	2:B:2159:ARG:H	2.19	0.45
2:B:2234:PHE:HD2	2:B:2238:MET:HG3	1.82	0.45
2:B:2302:LEU:H	2:B:2302:LEU:CD2	2.30	0.45
1:A:381:THR:HB	1:A:460:THR:HB	1.99	0.45
1:A:530:THR:HB	1:A:677:THR:OG1	2.17	0.45
1:A:125:ASP:C	1:A:127:LYS:H	2.21	0.44
1:A:389:GLU:CD	1:A:431:TYR:CE2	2.90	0.44
1:A:617:ILE:HG12	1:A:706:LEU:CD1	2.47	0.44
1:A:663:VAL:HG12	1:A:664:TYR:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1789:LEU:HD21	2:B:1835:TRP:NE1	2.32	0.44
2:B:1919:HIS:N	2:B:1919:HIS:CD2	2.85	0.44
2:B:2102:ILE:HD12	2:B:2152:HIS:HB2	1.98	0.44
3:C:3:BMA:H62	3:C:4:MAN:H5	1.99	0.44
1:A:503:ILE:C	1:A:504:LEU:HG	2.37	0.44
1:A:651:VAL:HG11	1:A:668:LEU:HA	1.97	0.44
2:B:1755:HIS:CD2	2:B:1876:PHE:CD1	3.04	0.44
2:B:1860:THR:O	2:B:1862:THR:OG1	2.36	0.44
2:B:1932:LEU:HB2	2:B:2015:LEU:HD12	1.97	0.44
2:B:2038:THR:HG23	2:B:2072:LYS:HB3	1.99	0.44
2:B:2200:PHE:CZ	2:B:2215:ARG:HD3	2.52	0.44
2:B:2260:PHE:CZ	2:B:2295:ASN:ND2	2.86	0.44
2:B:2081:ILE:CG1	2:B:2144:ILE:HB	2.42	0.44
2:B:2096:LEU:CD1	2:B:2159:ARG:HB3	2.44	0.44
1:A:68:TRP:CZ2	1:A:69:MET:HE2	2.53	0.44
1:A:491:LEU:CB	1:A:492:PRO:HD2	2.39	0.44
1:A:625:LEU:HD13	1:A:706:LEU:HD21	1.99	0.44
1:A:705:LEU:HD22	1:A:705:LEU:H	1.80	0.44
2:B:1934:MET:HB3	2:B:2016:VAL:CA	2.47	0.44
1:A:243:PRO:HB2	1:A:244:GLY:H	1.61	0.44
2:B:1851:LEU:C	2:B:1851:LEU:HD22	2.38	0.44
2:B:2275:PHE:N	2:B:2275:PHE:HD1	2.16	0.44
1:A:159:LEU:CD1	1:A:168:LEU:HD21	2.48	0.44
1:A:621:VAL:HG12	1:A:622:PHE:CD2	2.53	0.44
2:B:1929:LEU:HD22	2:B:2012:THR:HG21	2.00	0.44
2:B:2264:SER:CB	2:B:2301:LEU:HD23	2.45	0.44
1:A:263:THR:O	1:A:265:GLU:N	2.49	0.44
1:A:385:TYR:CG	1:A:436:PHE:O	2.70	0.44
1:A:683:GLU:CD	1:A:683:GLU:H	2.20	0.44
2:B:1865:PRO:C	2:B:1867:HIS:N	2.67	0.44
2:B:1878:LEU:HD11	2:B:1942:TRP:CZ3	2.52	0.44
2:B:1924:TYR:CD1	2:B:1928:THR:HB	2.53	0.44
2:B:1995:ILE:HD13	2:B:1995:ILE:H	1.83	0.44
2:B:2031:HIS:HB2	2:B:2294:VAL:CG1	2.47	0.44
2:B:1849:SER:HA	2:B:1888:SER:HB2	2.00	0.44
2:B:1934:MET:HE3	2:B:1940:ILE:CG2	2.45	0.44
5:E:6:MAN:O5	5:E:7:MAN:H2	2.17	0.44
1:A:663:VAL:CB	2:B:1968:LYS:HD2	2.46	0.44
2:B:1889:TRP:CD2	2:B:1890:TYR:N	2.82	0.44
2:B:2022:GLN:OE1	2:B:2082:HIS:HB2	2.17	0.44
1:A:477:PRO:HG3	1:A:513:TRP:CD2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:648:PHE:HD1	1:A:648:PHE:HA	1.53	0.43
2:B:1973:MET:HE1	2:B:1976:TYR:CD1	2.53	0.43
1:A:4:ARG:HG2	1:A:5:TYR:N	2.32	0.43
1:A:94:HIS:CE1	1:A:207:SER:OG	2.71	0.43
1:A:476:TYR:CG	1:A:477:PRO:HD2	2.53	0.43
1:A:656:TYR:HD2	1:A:659:LYS:NZ	2.16	0.43
1:A:683:GLU:C	1:A:685:PRO:HD2	2.39	0.43
2:B:2273:LEU:O	2:B:2275:PHE:HE1	1.96	0.43
1:A:4:ARG:HG3	1:A:85:VAL:O	2.18	0.43
1:A:234:VAL:O	1:A:235:ASN:HB2	2.18	0.43
1:A:412:LEU:CA	1:A:420:GLY:HA3	2.42	0.43
1:A:421:ARG:HG2	1:A:422:LYS:H	1.83	0.43
1:A:461:LEU:HB3	1:A:463:ILE:CD1	2.49	0.43
1:A:496:LYS:HD3	1:A:496:LYS:HA	1.69	0.43
1:A:533:TYR:CZ	1:A:549:GLY:HA3	2.54	0.43
2:B:1763:ILE:O	2:B:1763:ILE:CG2	2.66	0.43
2:B:2052:ARG:CD	2:B:2165:GLU:CB	2.72	0.43
2:B:2229:TRP:HA	2:B:2308:ILE:O	2.18	0.43
1:A:291:ILE:HG23	2:B:1955:SER:OG	2.18	0.43
1:A:509:PHE:CD1	1:A:510:LYS:N	2.86	0.43
1:A:627:LEU:HD13	1:A:707:LYS:O	2.18	0.43
2:B:1958:PHE:O	2:B:1959:SER:C	2.56	0.43
1:A:137:VAL:HG11	2:B:2329:GLN:OE1	2.19	0.43
1:A:412:LEU:C	1:A:420:GLY:HA3	2.39	0.43
1:A:432:THR:CB	1:A:433:ASP:OD1	2.65	0.43
1:A:526:PRO:O	1:A:679:PHE:CZ	2.59	0.43
1:A:652:PHE:C	1:A:657:THR:O	2.56	0.43
2:B:1756:LEU:N	2:B:1756:LEU:CD2	2.81	0.43
2:B:1922:ASN:HD22	2:B:1929:LEU:HD11	1.82	0.43
2:B:2075:LEU:C	2:B:2076:LEU:HG	2.38	0.43
2:B:1787:SER:H	2:B:1790:ILE:CG1	2.31	0.43
2:B:1922:ASN:HB2	2:B:1929:LEU:HD11	2.01	0.43
2:B:1934:MET:CB	2:B:2016:VAL:HA	2.48	0.43
2:B:2252:LEU:HD13	2:B:2252:LEU:O	2.18	0.43
2:B:2314:VAL:O	2:B:2315:HIS:HB2	2.19	0.43
1:A:86:ILE:HD12	1:A:98:LEU:HD21	2.01	0.43
1:A:309:PHE:HA	1:A:321:GLU:HA	2.01	0.43
1:A:580:ASP:O	1:A:582:ASN:N	2.44	0.43
2:B:1933:VAL:HG23	2:B:1933:VAL:O	2.19	0.43
1:A:198:LEU:H	1:A:235:ASN:ND2	2.17	0.43
1:A:385:TYR:CD1	1:A:436:PHE:HB3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:385:TYR:CE2	1:A:436:PHE:O	2.71	0.43
1:A:393:TRP:HD1	1:A:395:TYR:HE1	1.63	0.43
2:B:2106:SER:OG	2:B:2107:LEU:N	2.51	0.43
1:A:83:THR:HG22	1:A:140:VAL:N	2.24	0.43
1:A:267:HIS:HE1	1:A:320:MET:HG3	1.84	0.43
1:A:467:ASN:HB3	1:A:504:LEU:O	2.19	0.43
1:A:651:VAL:O	1:A:693:HIS:ND1	2.49	0.43
2:B:1782:PRO:HG3	2:B:1808:LYS:HA	2.00	0.43
1:A:427:ARG:CD	1:A:448:ILE:HA	2.49	0.42
2:B:2052:ARG:HD3	2:B:2165:GLU:HG3	2.01	0.42
3:C:2:NAG:O3	3:C:3:BMA:H4	2.19	0.42
1:A:391:GLU:HG2	1:A:392:ASP:N	2.35	0.42
1:A:396:ALA:CB	1:A:421:ARG:HH12	2.32	0.42
1:A:688:TRP:HZ2	2:B:1799:GLY:N	2.16	0.42
2:B:2286:ASN:H	2:B:2293:VAL:CG1	2.32	0.42
1:A:90:ASN:HD21	1:A:95:PRO:HA	1.84	0.42
2:B:1966:ARG:HA	2:B:1969:GLU:O	2.19	0.42
2:B:2076:LEU:C	2:B:2147:ARG:HE	2.22	0.42
1:A:86:ILE:HG22	1:A:87:THR:N	2.35	0.42
1:A:169:ASN:O	1:A:170:SER:CB	2.65	0.42
1:A:202:PHE:O	1:A:231:MET:HB2	2.19	0.42
1:A:602:GLN:OE1	1:A:602:GLN:HA	2.20	0.42
1:A:620:TYR:O	1:A:621:VAL:CB	2.67	0.42
2:B:1785:PHE:HB3	2:B:1815:TYR:CE2	2.55	0.42
2:B:1929:LEU:HA	2:B:1930:PRO:HD3	1.73	0.42
2:B:1973:MET:CE	2:B:1976:TYR:CD1	3.02	0.42
2:B:2039:ALA:C	2:B:2041:GLY:H	2.22	0.42
1:A:168:LEU:N	1:A:172:LEU:HD13	2.34	0.42
1:A:307:LEU:HD12	1:A:322:ALA:C	2.40	0.42
1:A:537:VAL:HB	1:A:542:ASP:OD1	2.20	0.42
1:A:542:ASP:O	1:A:545:SER:CB	2.68	0.42
2:B:1889:TRP:NE1	2:B:1892:THR:CG2	2.83	0.42
2:B:2045:GLN:O	2:B:2047:ALA:N	2.47	0.42
2:B:2193:SER:HA	2:B:2229:TRP:CE2	2.54	0.42
1:A:87:THR:HA	1:A:135:THR:HA	2.00	0.42
1:A:94:HIS:CD2	1:A:95:PRO:HD2	2.55	0.42
1:A:98:LEU:HB3	1:A:136:TYR:CE1	2.55	0.42
1:A:417:GLN:CD	1:A:601:VAL:HG22	2.29	0.42
1:A:504:LEU:HD23	1:A:509:PHE:HB2	2.01	0.42
2:B:2000:CYS:HB3	2:B:2010:MET:HG2	2.01	0.42
2:B:2042:GLN:HB2	2:B:2063:SER:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2181:GLU:C	2:B:2183:LYS:H	2.23	0.42
1:A:270:PHE:HB2	1:A:309:PHE:CE1	2.47	0.42
1:A:393:TRP:NE1	1:A:448:ILE:HG23	2.35	0.42
1:A:432:THR:HG22	1:A:433:ASP:OD1	2.19	0.42
1:A:504:LEU:CD2	1:A:509:PHE:HB2	2.50	0.42
1:A:509:PHE:HB3	1:A:511:TYR:CE1	2.53	0.42
2:B:2156:TYR:N	2:B:2156:TYR:HD1	2.17	0.42
2:B:2180:MET:HE3	2:B:2232:VAL:HG11	2.01	0.42
2:B:2211:HIS:CE1	2:B:2292:PRO:HG3	2.55	0.42
1:A:14:TRP:CE2	1:A:71:LEU:HD13	2.54	0.42
1:A:232:HIS:CD2	1:A:318:ASP:HB3	2.55	0.42
1:A:640:LEU:HB3	1:A:677:THR:OG1	2.20	0.42
1:A:645:GLN:CD	1:A:645:GLN:N	2.73	0.42
2:B:1924:TYR:HB3	2:B:1928:THR:HB	2.02	0.42
2:B:1951:GLU:O	2:B:1953:ILE:CD1	2.68	0.42
1:A:428:PHE:HE2	1:A:475:ILE:HG13	1.82	0.42
1:A:687:LEU:HA	1:A:687:LEU:HD22	1.89	0.42
2:B:1863:LEU:HB2	2:B:1870:GLN:N	2.27	0.42
2:B:2311:GLN:O	2:B:2313:TRP:CD1	2.73	0.42
2:B:2329:GLN:C	2:B:2332:TYR:O	2.55	0.42
1:A:453:LEU:CD2	1:A:533:TYR:CD2	3.00	0.42
1:A:685:PRO:HG2	2:B:1822:HIS:CE1	2.52	0.42
1:A:687:LEU:HD13	1:A:688:TRP:H	1.85	0.42
1:A:155:THR:HG23	1:A:295:THR:OG1	2.20	0.41
1:A:605:ASP:OD1	1:A:606:PRO:HD2	2.20	0.41
2:B:1697:HIS:ND1	2:B:1697:HIS:N	2.67	0.41
2:B:1699:PHE:CZ	2:B:1740:ASP:OD2	2.73	0.41
2:B:1762:TYR:HB3	2:B:1764:ARG:HE	1.84	0.41
2:B:1972:LYS:HE3	2:B:1972:LYS:HB2	1.86	0.41
1:A:311:HIS:ND1	1:A:311:HIS:C	2.74	0.41
2:B:1774:THR:CG2	2:B:1814:THR:HG22	2.50	0.41
2:B:1791:SER:OG	2:B:1792:TYR:N	2.53	0.41
2:B:2295:ASN:OD1	2:B:2295:ASN:N	2.52	0.41
1:A:313:SER:OG	1:A:314:SER:N	2.53	0.41
1:A:543:LEU:HD11	1:A:642:ILE:HG21	2.02	0.41
2:B:1733:VAL:O	2:B:1850:GLY:CA	2.68	0.41
2:B:1758:LEU:HD21	2:B:1923:GLY:HA3	2.01	0.41
2:B:1790:ILE:O	2:B:1790:ILE:HG22	2.20	0.41
2:B:2002:ILE:HB	2:B:2005:HIS:HB2	2.00	0.41
2:B:2176:MET:SD	2:B:2177:PRO:HD2	2.59	0.41
2:B:2281:LYS:HE2	2:B:2282:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:83:THR:HB	1:A:139:GLN:HA	2.02	0.41
1:A:200:ALA:HB3	1:A:202:PHE:HE1	1.85	0.41
2:B:1821:HIS:C	2:B:1823:MET:H	2.24	0.41
2:B:2070:TRP:HE3	2:B:2150:ARG:HD2	1.85	0.41
2:B:2246:GLN:N	2:B:2286:ASN:ND2	2.68	0.41
1:A:77:GLN:CB	1:A:177:LEU:HD12	2.44	0.41
1:A:163:ASP:HB3	1:A:166:LYS:HB3	2.01	0.41
1:A:232:HIS:CD2	1:A:318:ASP:HB2	2.56	0.41
1:A:432:THR:CB	1:A:440:GLU:HB3	2.46	0.41
1:A:8:GLY:N	1:A:52:VAL:O	2.46	0.41
1:A:197:LEU:HD11	1:A:255:TRP:CE3	2.55	0.41
1:A:200:ALA:HB1	1:A:202:PHE:CE1	2.56	0.41
1:A:422:LYS:HB2	1:A:422:LYS:HE3	1.81	0.41
2:B:1839:SER:N	2:B:1851:LEU:HD21	2.35	0.41
2:B:2302:LEU:HD22	2:B:2302:LEU:N	2.35	0.41
2:B:2304:ARG:HD2	2:B:2305:TYR:CE2	2.56	0.41
5:E:3:BMA:H61	5:E:6:MAN:H2	1.36	0.41
1:A:75:THR:CG2	1:A:175:ALA:HB3	2.27	0.41
1:A:159:LEU:HD23	1:A:159:LEU:N	2.36	0.41
1:A:574:ILE:HB	1:A:639:ILE:HG22	2.03	0.41
1:A:608:PHE:HA	1:A:611:SER:OG	2.21	0.41
1:A:309:PHE:HB2	1:A:321:GLU:HG2	2.02	0.41
1:A:387:ALA:HB2	1:A:466:LYS:HG3	2.02	0.41
2:B:1946:SER:N	2:B:1978:LEU:HD12	2.36	0.41
1:A:471:ARG:HG3	1:A:585:TRP:CZ3	2.36	0.41
1:A:527:ARG:HD2	1:A:527:ARG:H	1.86	0.41
1:A:690:LEU:HB3	1:A:708:VAL:N	2.36	0.41
1:A:690:LEU:CD2	1:A:692:CYS:HB2	2.51	0.41
1:A:698:ARG:O	1:A:699:ASN:C	2.59	0.41
1:A:708:VAL:CG1	1:A:709:SER:N	2.84	0.41
2:B:1739:THR:CB	2:B:1746:PRO:HG2	2.51	0.41
2:B:1831:ASP:OD1	2:B:1831:ASP:N	2.53	0.41
2:B:1885:GLU:HB3	2:B:1886:THR:H	1.57	0.41
2:B:1891:PHE:O	2:B:1892:THR:C	2.58	0.41
2:B:1929:LEU:HG	2:B:1930:PRO:CD	2.51	0.41
2:B:1947:MET:HE3	2:B:1947:MET:HA	2.03	0.41
2:B:1997:ARG:HG2	2:B:1999:GLU:HG2	2.02	0.41
2:B:2081:ILE:HD12	2:B:2149:ILE:CD1	2.43	0.41
2:B:2105:TYR:CD2	2:B:2144:ILE:CG2	3.04	0.41
2:B:2261:LEU:O	2:B:2309:HIS:N	2.37	0.41
1:A:232:HIS:HD2	1:A:318:ASP:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:234:VAL:O	1:A:235:ASN:CB	2.69	0.41
1:A:461:LEU:HD22	1:A:513:TRP:HE3	1.84	0.41
1:A:503:ILE:C	1:A:504:LEU:HD12	2.41	0.41
1:A:663:VAL:HG22	2:B:1968:LYS:NZ	2.36	0.41
2:B:1745:GLN:HA	2:B:1746:PRO:HA	1.65	0.41
2:B:1749:ARG:HH11	2:B:1749:ARG:CG	2.30	0.41
2:B:1771:ILE:HD12	2:B:1817:TRP:HE1	1.86	0.41
1:A:7:LEU:HG	1:A:8:GLY:O	2.21	0.40
1:A:163:ASP:O	1:A:167:ASP:HB2	2.21	0.40
1:A:512:LYS:HE3	1:A:514:THR:HG1	1.85	0.40
1:A:663:VAL:HG22	2:B:1968:LYS:CE	2.49	0.40
1:A:663:VAL:HG22	2:B:1968:LYS:HZ3	1.86	0.40
1:A:702:MET:O	1:A:703:THR:OG1	2.34	0.40
2:B:1730:PHE:HA	2:B:1893:GLU:OE1	2.20	0.40
2:B:1870:GLN:O	2:B:1871:VAL:HB	2.21	0.40
1:A:65:ARG:O	1:A:66:PRO:O	2.39	0.40
1:A:147:MET:CE	2:B:1972:LYS:HZ2	2.34	0.40
1:A:247:GLY:O	1:A:326:VAL:HG23	2.21	0.40
1:A:290:PRO:HG2	1:A:291:ILE:H	1.86	0.40
1:A:470:SER:HB3	1:A:471:ARG:H	1.64	0.40
1:A:476:TYR:HA	1:A:477:PRO:HD3	1.97	0.40
1:A:683:GLU:HB2	1:A:685:PRO:HD2	2.03	0.40
2:B:1849:SER:OG	2:B:1888:SER:C	2.59	0.40
2:B:2048:PRO:CG	2:B:2062:TRP:CD1	2.94	0.40
2:B:2242:GLY:HA2	2:B:2297:LEU:HD12	2.03	0.40
2:B:2274:PHE:CD1	2:B:2274:PHE:C	2.95	0.40
2:B:2322:GLU:HG3	2:B:2323:VAL:O	2.20	0.40
1:A:3:ARG:HH12	1:A:79:GLU:HG2	1.86	0.40
1:A:8:GLY:HA3	1:A:52:VAL:HG22	2.02	0.40
1:A:105:TYR:HB3	1:A:109:SER:CB	2.22	0.40
1:A:238:VAL:N	1:A:241:SER:OG	2.54	0.40
1:A:376:LYS:C	1:A:377:LYS:HG2	2.42	0.40
1:A:400:LEU:HD23	1:A:400:LEU:N	2.36	0.40
1:A:432:THR:CG2	1:A:433:ASP:OD1	2.70	0.40
1:A:526:PRO:HB2	1:A:679:PHE:CZ	2.56	0.40
2:B:1699:PHE:HD1	2:B:1774:THR:OG1	2.05	0.40
2:B:1739:THR:CB	2:B:1746:PRO:CG	2.99	0.40
2:B:1831:ASP:O	2:B:1858:CYS:CB	2.66	0.40
2:B:1927:ASP:OD1	2:B:2011:SER:O	2.39	0.40
2:B:2236:LYS:HB3	2:B:2330:ASP:OD1	2.21	0.40
1:A:114:TYR:N	1:A:114:TYR:CD1	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:694:ASN:O	1:A:696:ASP:N	2.54	0.40
2:B:1759:LEU:HD11	2:B:1879:PHE:HB3	2.03	0.40
2:B:2032:ILE:HA	2:B:2036:GLN:HE22	1.85	0.40
2:B:2035:PHE:CE1	2:B:2036:GLN:HG3	2.57	0.40
2:B:2059:ILE:HG13	2:B:2059:ILE:O	2.21	0.40
2:B:2166:LEU:H	2:B:2166:LEU:HG	1.66	0.40
1:A:56:ASP:O	1:A:57:HIS:CB	2.66	0.40
1:A:100:ALA:O	1:A:101:VAL:C	2.59	0.40
1:A:237:TYR:CD1	1:A:242:LEU:HD22	2.57	0.40
1:A:386:ILE:CD1	1:A:428:PHE:HD2	2.31	0.40
1:A:663:VAL:HG13	2:B:1968:LYS:CG	2.52	0.40
2:B:1784:SER:HB3	2:B:1840:ASP:OD1	2.21	0.40
2:B:1819:VAL:HA	2:B:1823:MET:HE1	2.01	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:250:ARG:NH1	1:A:496:LYS:NZ[7_555]	1.94	0.26

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	599/740 (81%)	448 (75%)	111 (18%)	40 (7%)	<b>1</b> <b>18</b>
2	B	613/865 (71%)	498 (81%)	87 (14%)	28 (5%)	<b>2</b> <b>24</b>
All	All	1212/1605 (76%)	946 (78%)	198 (16%)	68 (6%)	<b>2</b> <b>21</b>

All (68) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	106	TRP
1	A	127	LYS
1	A	229	PRO
1	A	243	PRO
1	A	312	ILE
1	A	437	LYS
1	A	492	PRO
1	A	497	HIS
1	A	621	VAL
1	A	646	THR
1	A	663	VAL
1	A	705	LEU
1	A	713	LYS
2	B	1740	ASP
2	B	1768	GLU
2	B	1841	VAL
2	B	1871	VAL
2	B	1886	THR
2	B	1930	PRO
2	B	1984	GLU
2	B	2158	ILE
1	A	403	ASP
1	A	695	SER
1	A	706	LEU
2	B	1935	ALA
2	B	2049	LYS
2	B	2170	ASP
1	A	66	PRO
1	A	159	LEU
1	A	434	GLU
1	A	501	PHE
1	A	539	MET
1	A	618	ASN
1	A	658	PHE
2	B	1695	THR
2	B	1909	ASP
2	B	2052	ARG
1	A	153	CYS
1	A	163	ASP
1	A	264	PRO
1	A	284	ALA
1	A	397	PRO
2	B	1746	PRO

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Mol	Chain	Res	Type
2	B	1830	PHE
2	B	1908	GLU
2	B	1922	ASN
2	B	1967	LYS
1	A	410	GLN
1	A	601	VAL
1	A	674	SER
1	A	689	ILE
2	B	1854	PRO
2	B	2200	PHE
2	B	2273	LEU
2	B	2286	ASN
1	A	684	ASN
1	A	699	ASN
2	B	1752	LEU
2	B	1926	MET
2	B	2299	PRO
1	A	502	PRO
1	A	103	VAL
1	A	550	PRO
1	A	378	HIS
1	A	546	GLY
2	B	2135	ILE
2	B	2292	PRO
1	A	242	LEU

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	542/660 (82%)	415 (77%)	127 (23%)	<b>1</b> <b>5</b>
2	B	550/776 (71%)	413 (75%)	137 (25%)	<b>0</b> <b>4</b>
All	All	1092/1436 (76%)	828 (76%)	264 (24%)	<b>0</b> <b>5</b>

All (264) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	49	THR
1	A	55	THR
1	A	76	ILE
1	A	82	ASP
1	A	84	VAL
1	A	94	HIS
1	A	99	HIS
1	A	105	TYR
1	A	106	TRP
1	A	114	TYR
1	A	120	GLN
1	A	127	LYS
1	A	129	PHE
1	A	138	TRP
1	A	142	LYS
1	A	147	MET
1	A	149	SER
1	A	152	LEU
1	A	154	LEU
1	A	177	LEU
1	A	194	LYS
1	A	198	LEU
1	A	201	VAL
1	A	230	LYS
1	A	233	THR
1	A	235	ASN
1	A	241	SER
1	A	242	LEU
1	A	260	MET
1	A	279	ARG
1	A	291	ILE
1	A	292	THR
1	A	295	THR
1	A	299	LEU
1	A	302	ASP
1	A	306	PHE
1	A	309	PHE
1	A	311	HIS
1	A	318	ASP
1	A	328	SER
1	A	331	GLU
1	A	376	LYS
1	A	381	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	382	TRP
1	A	383	VAL
1	A	386	ILE
1	A	392	ASP
1	A	393	TRP
1	A	398	LEU
1	A	400	LEU
1	A	403	ASP
1	A	404	ASP
1	A	410	GLN
1	A	412	LEU
1	A	413	ASN
1	A	421	ARG
1	A	426	VAL
1	A	431	TYR
1	A	433	ASP
1	A	437	LYS
1	A	448	ILE
1	A	453	LEU
1	A	454	TYR
1	A	457	VAL
1	A	460	THR
1	A	470	SER
1	A	471	ARG
1	A	475	ILE
1	A	481	THR
1	A	486	LEU
1	A	496	LYS
1	A	498	LEU
1	A	499	LYS
1	A	500	ASP
1	A	503	ILE
1	A	504	LEU
1	A	509	PHE
1	A	514	THR
1	A	516	THR
1	A	517	VAL
1	A	518	GLU
1	A	523	LYS
1	A	524	SER
1	A	525	ASP
1	A	527	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	529	LEU
1	A	531	ARG
1	A	536	PHE
1	A	538	ASN
1	A	539	MET
1	A	540	GLU
1	A	545	SER
1	A	552	LEU
1	A	555	TYR
1	A	571	ARG
1	A	573	VAL
1	A	575	LEU
1	A	578	VAL
1	A	588	THR
1	A	593	ARG
1	A	601	VAL
1	A	603	LEU
1	A	604	GLU
1	A	611	SER
1	A	618	ASN
1	A	620	TYR
1	A	624	SER
1	A	629	VAL
1	A	636	TYR
1	A	648	PHE
1	A	659	LYS
1	A	663	VAL
1	A	664	TYR
1	A	668	LEU
1	A	673	PHE
1	A	680	MET
1	A	683	GLU
1	A	684	ASN
1	A	687	LEU
1	A	688	TRP
1	A	690	LEU
1	A	698	ARG
1	A	699	ASN
1	A	705	LEU
1	A	708	VAL
1	A	709	SER
1	A	713	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	B	1694	LYS
2	B	1695	THR
2	B	1696	ARG
2	B	1697	HIS
2	B	1700	ILE
2	B	1705	ARG
2	B	1707	TRP
2	B	1708	ASP
2	B	1711	MET
2	B	1726	SER
2	B	1733	VAL
2	B	1747	LEU
2	B	1749	ARG
2	B	1752	LEU
2	B	1756	LEU
2	B	1758	LEU
2	B	1759	LEU
2	B	1767	VAL
2	B	1769	ASP
2	B	1780	SER
2	B	1781	ARG
2	B	1786	TYR
2	B	1797	ARG
2	B	1804	LYS
2	B	1810	ASN
2	B	1814	THR
2	B	1827	LYS
2	B	1828	ASP
2	B	1831	ASP
2	B	1843	LEU
2	B	1846	ASP
2	B	1849	SER
2	B	1851	LEU
2	B	1856	LEU
2	B	1857	VAL
2	B	1859	HIS
2	B	1862	THR
2	B	1863	LEU
2	B	1867	HIS
2	B	1869	ARG
2	B	1879	PHE
2	B	1882	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	B	1889	TRP
2	B	1890	TYR
2	B	1891	PHE
2	B	1914	GLU
2	B	1928	THR
2	B	1934	MET
2	B	1938	GLN
2	B	1944	LEU
2	B	1945	LEU
2	B	1946	SER
2	B	1947	MET
2	B	1951	GLU
2	B	1952	ASN
2	B	1953	ILE
2	B	1964	THR
2	B	1967	LYS
2	B	1973	MET
2	B	1975	LEU
2	B	1977	ASN
2	B	1978	LEU
2	B	1984	GLU
2	B	1989	LEU
2	B	1995	ILE
2	B	1997	ARG
2	B	1999	GLU
2	B	2004	GLU
2	B	2013	LEU
2	B	2015	LEU
2	B	2022	GLN
2	B	2027	MET
2	B	2034	ASP
2	B	2035	PHE
2	B	2037	ILE
2	B	2040	SER
2	B	2042	GLN
2	B	2049	LYS
2	B	2068	PHE
2	B	2076	LEU
2	B	2079	MET
2	B	2081	ILE
2	B	2090	ARG
2	B	2091	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	B	2095	SER
2	B	2096	LEU
2	B	2098	ILE
2	B	2101	PHE
2	B	2102	ILE
2	B	2111	LYS
2	B	2114	THR
2	B	2116	ARG
2	B	2120	THR
2	B	2123	LEU
2	B	2129	ASN
2	B	2135	ILE
2	B	2139	ILE
2	B	2145	ILE
2	B	2154	THR
2	B	2156	TYR
2	B	2157	SER
2	B	2165	GLU
2	B	2166	LEU
2	B	2171	LEU
2	B	2175	SER
2	B	2178	LEU
2	B	2186	SER
2	B	2195	TYR
2	B	2199	MET
2	B	2204	SER
2	B	2206	SER
2	B	2212	LEU
2	B	2213	GLN
2	B	2220	ARG
2	B	2232	VAL
2	B	2237	THR
2	B	2243	VAL
2	B	2245	THR
2	B	2246	GLN
2	B	2249	LYS
2	B	2261	LEU
2	B	2262	ILE
2	B	2269	HIS
2	B	2275	PHE
2	B	2280	VAL
2	B	2281	LYS

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Mol	Chain	Res	Type
2	B	2290	PHE
2	B	2295	ASN
2	B	2297	LEU
2	B	2301	LEU
2	B	2302	LEU
2	B	2304	ARG
2	B	2306	LEU
2	B	2307	ARG
2	B	2326	CYS
2	B	2331	LEU
2	B	2332	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	94	HIS
1	A	232	HIS
1	A	615	HIS
1	A	684	ASN
2	B	2287	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

13 monosaccharides are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	NAG	C	1	3,1	14,14,15	0.45	0	17,19,21	0.74	0
3	NAG	C	2	3	14,14,15	0.38	0	17,19,21	1.27	1 (5%)
3	BMA	C	3	3	11,11,12	0.34	0	15,15,17	1.84	3 (20%)
3	MAN	C	4	3	11,11,12	0.29	0	15,15,17	0.94	1 (6%)
4	NAG	D	1	4,2	14,14,15	0.63	0	17,19,21	1.48	2 (11%)
4	NAG	D	2	4	14,14,15	0.43	0	17,19,21	1.70	5 (29%)
5	NAG	E	1	5,2	14,14,15	0.51	0	17,19,21	2.48	5 (29%)
5	NAG	E	2	5	14,14,15	0.55	0	17,19,21	1.41	3 (17%)
5	BMA	E	3	5	11,11,12	0.58	0	15,15,17	1.08	1 (6%)
5	BMA	E	4	5	11,11,12	0.28	0	15,15,17	0.76	0
5	MAN	E	5	5	11,11,12	0.27	0	15,15,17	0.57	0
5	MAN	E	6	5	11,11,12	0.62	0	15,15,17	1.38	2 (13%)
5	MAN	E	7	5	11,11,12	0.48	0	15,15,17	0.75	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	C	1	3,1	-	2/6/23/26	0/1/1/1
3	NAG	C	2	3	-	2/6/23/26	0/1/1/1
3	BMA	C	3	3	-	2/2/19/22	0/1/1/1
3	MAN	C	4	3	-	2/2/19/22	0/1/1/1
4	NAG	D	1	4,2	-	2/6/23/26	0/1/1/1
4	NAG	D	2	4	-	4/6/23/26	0/1/1/1
5	NAG	E	1	5,2	-	2/6/23/26	0/1/1/1
5	NAG	E	2	5	-	2/6/23/26	0/1/1/1
5	BMA	E	3	5	-	2/2/19/22	0/1/1/1
5	BMA	E	4	5	-	0/2/19/22	0/1/1/1
5	MAN	E	5	5	-	0/2/19/22	0/1/1/1
5	MAN	E	6	5	-	0/2/19/22	0/1/1/1
5	MAN	E	7	5	-	0/2/19/22	0/1/1/1

There are no bond length outliers.

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	E	1	NAG	O5-C5-C6	5.68	116.11	107.20
5	E	1	NAG	C2-N2-C7	5.50	130.73	122.90
3	C	3	BMA	C1-C2-C3	5.19	116.05	109.67
3	C	2	NAG	O5-C5-C6	3.88	113.28	107.20
4	D	2	NAG	C4-C3-C2	3.78	116.56	111.02
4	D	2	NAG	C3-C4-C5	3.53	116.54	110.24
5	E	1	NAG	C3-C4-C5	3.40	116.30	110.24
3	C	3	BMA	O5-C1-C2	3.38	115.98	110.77
5	E	6	MAN	C1-C2-C3	3.37	113.81	109.67
5	E	1	NAG	C1-C2-N2	3.17	115.90	110.49
4	D	1	NAG	C2-N2-C7	3.06	127.27	122.90
5	E	6	MAN	C1-O5-C5	3.04	116.31	112.19
5	E	2	NAG	O5-C5-C4	-2.83	103.94	110.83
5	E	2	NAG	C2-N2-C7	2.82	126.92	122.90
4	D	1	NAG	O5-C5-C6	2.80	111.59	107.20
5	E	3	BMA	C1-O5-C5	2.63	115.76	112.19
3	C	4	MAN	C1-C2-C3	2.54	112.78	109.67
5	E	2	NAG	C6-C5-C4	2.39	118.61	113.00
4	D	2	NAG	O5-C1-C2	-2.30	107.65	111.29
5	E	1	NAG	O5-C1-C2	2.23	114.82	111.29
3	C	3	BMA	C1-O5-C5	2.20	115.17	112.19
4	D	2	NAG	C2-N2-C7	2.19	126.02	122.90
4	D	2	NAG	C8-C7-N2	2.12	119.70	116.10

There are no chirality outliers.

All (20) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	D	2	NAG	O5-C5-C6-O6
5	E	3	BMA	O5-C5-C6-O6
4	D	1	NAG	C4-C5-C6-O6
3	C	4	MAN	O5-C5-C6-O6
4	D	2	NAG	C8-C7-N2-C2
4	D	2	NAG	O7-C7-N2-C2
5	E	3	BMA	C4-C5-C6-O6
3	C	1	NAG	O5-C5-C6-O6
5	E	1	NAG	O5-C5-C6-O6
4	D	2	NAG	C4-C5-C6-O6
5	E	2	NAG	O5-C5-C6-O6
3	C	2	NAG	C1-C2-N2-C7
4	D	1	NAG	O5-C5-C6-O6
5	E	2	NAG	C4-C5-C6-O6
3	C	1	NAG	C4-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
5	E	1	NAG	C4-C5-C6-O6
3	C	2	NAG	C3-C2-N2-C7
3	C	3	BMA	O5-C5-C6-O6
3	C	3	BMA	C4-C5-C6-O6
3	C	4	MAN	C4-C5-C6-O6

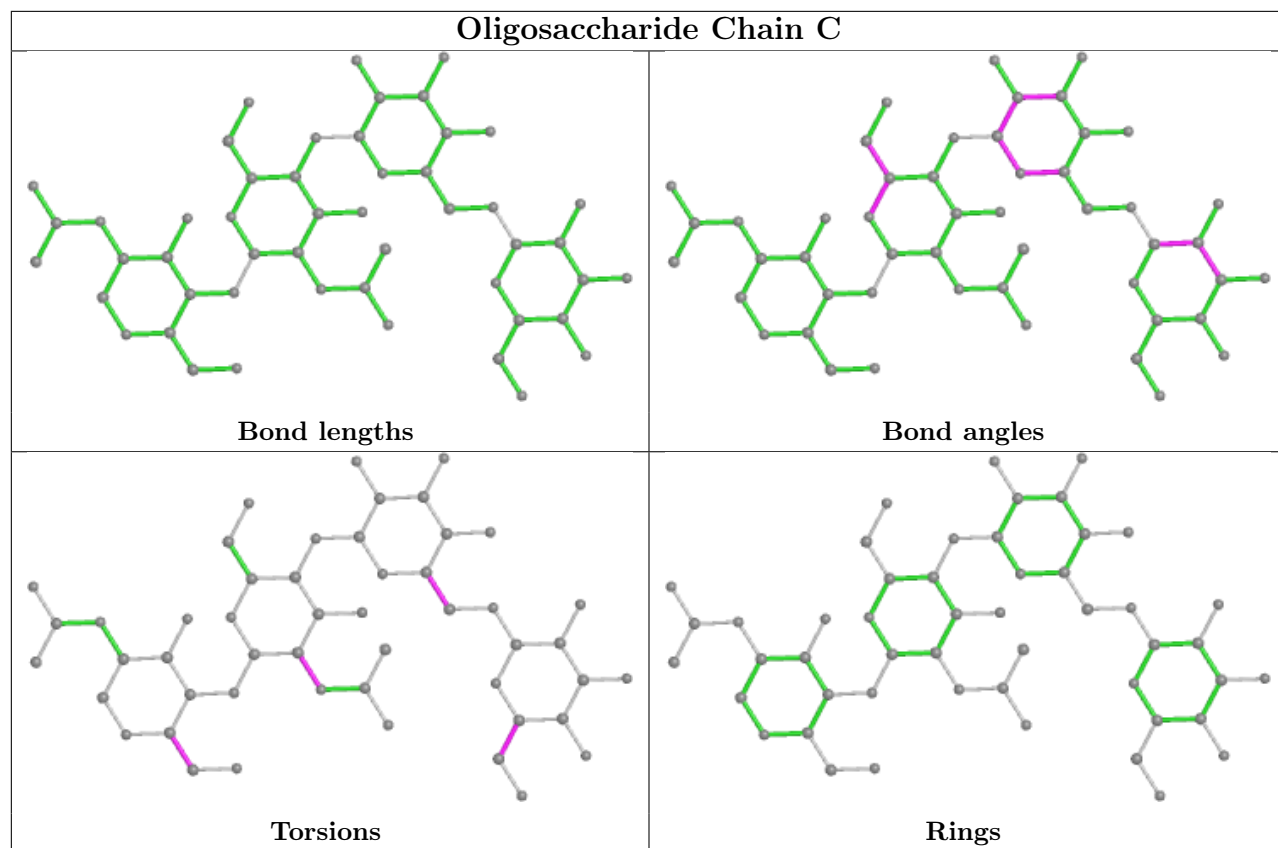
There are no ring outliers.

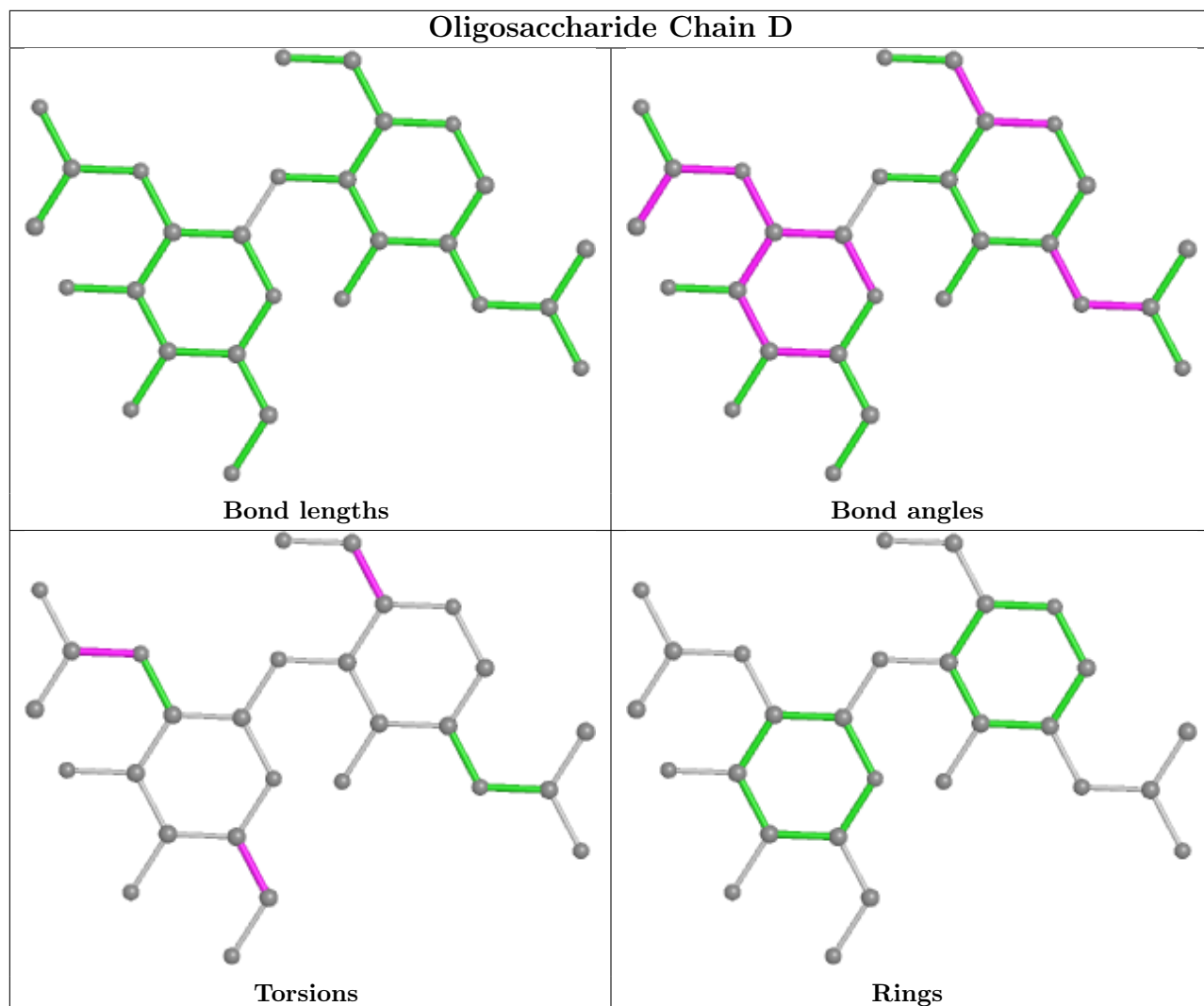
9 monomers are involved in 12 short contacts:

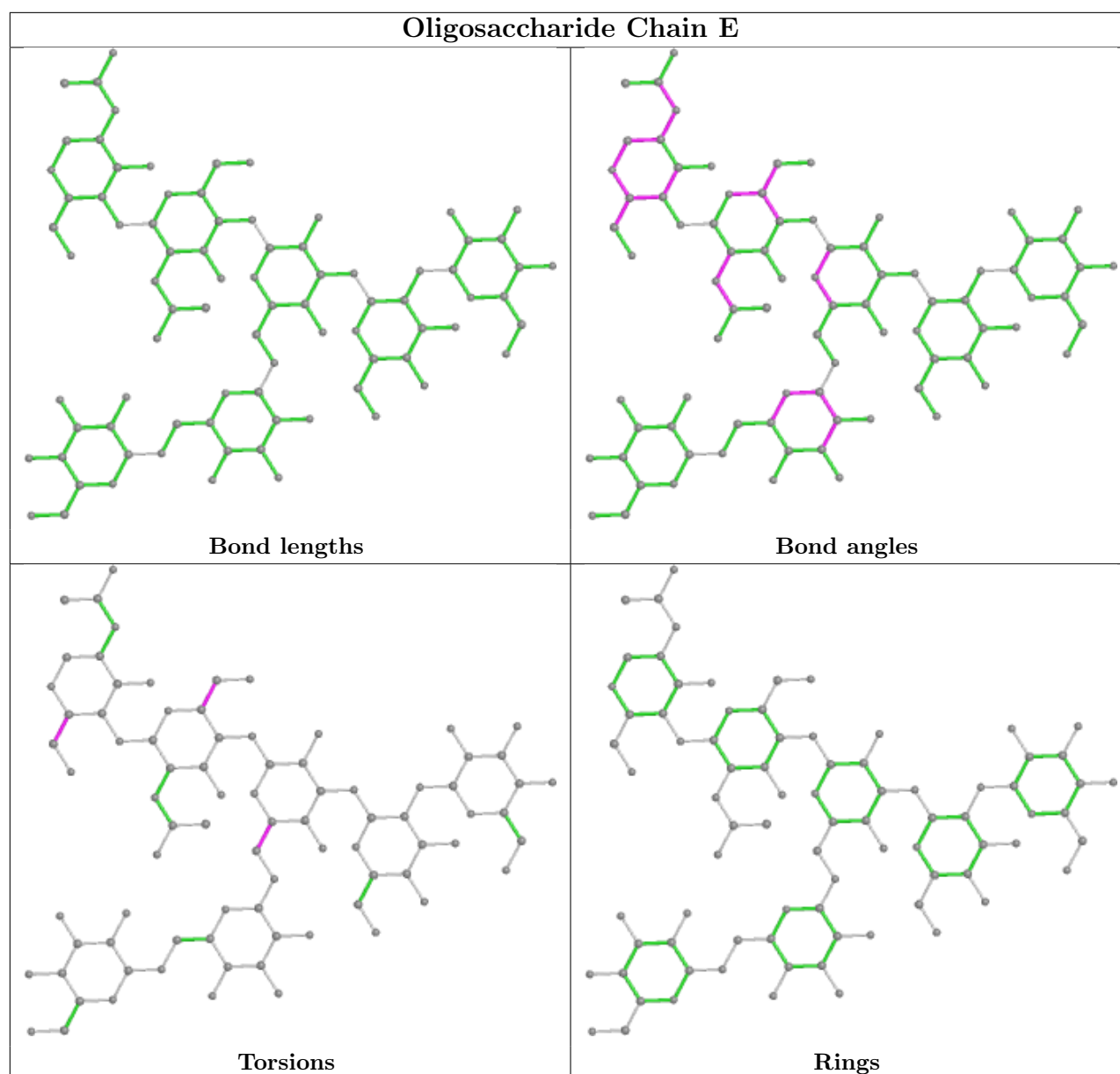
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	E	7	MAN	1	0
3	C	1	NAG	1	0
5	E	2	NAG	1	0
5	E	6	MAN	2	0
3	C	3	BMA	7	0
3	C	4	MAN	4	0
5	E	3	BMA	3	0
3	C	2	NAG	4	0
5	E	5	MAN	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.









## 5.6 Ligand geometry [i](#)

Of 5 ligands modelled in this entry, 5 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	611/740 (82%)	-0.42	1 (0%) 95 93	99, 186, 319, 397	0
2	B	619/865 (71%)	-0.36	3 (0%) 91 86	106, 195, 319, 424	0
All	All	1230/1605 (76%)	-0.39	4 (0%) 94 90	99, 191, 319, 424	0

All (4) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	2058	SER	2.4
1	A	190	GLN	2.3
2	B	1744	THR	2.3
2	B	1743	PHE	2.1

### 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

### 6.3 Carbohydrates [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

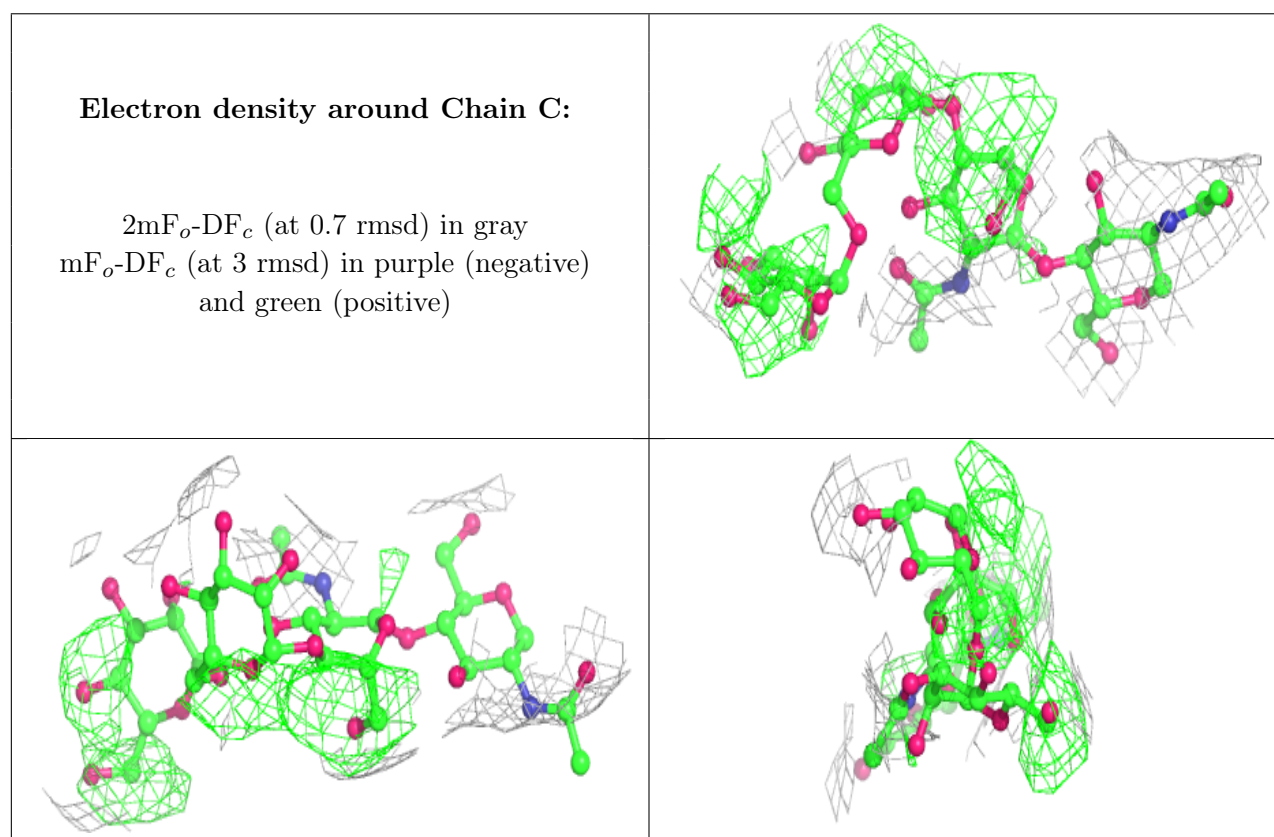
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
4	NAG	D	2	14/15	0.64	0.42	307,363,404,410	0
5	BMA	E	3	11/12	0.69	0.23	278,295,314,335	0
4	NAG	D	1	14/15	0.70	0.45	275,361,420,429	0
5	MAN	E	7	11/12	0.74	0.32	303,330,373,383	0
3	MAN	C	4	11/12	0.78	0.17	193,218,224,226	11

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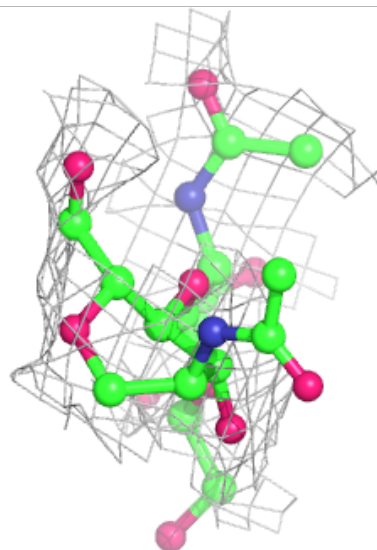
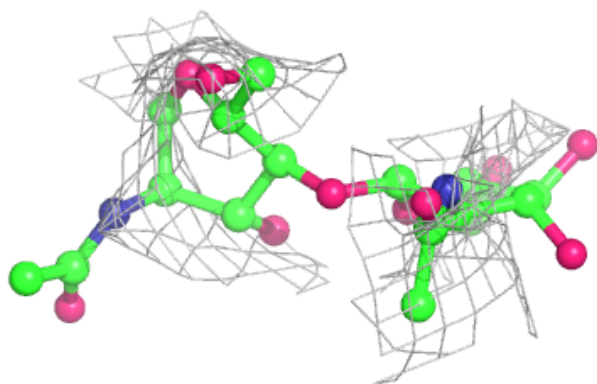
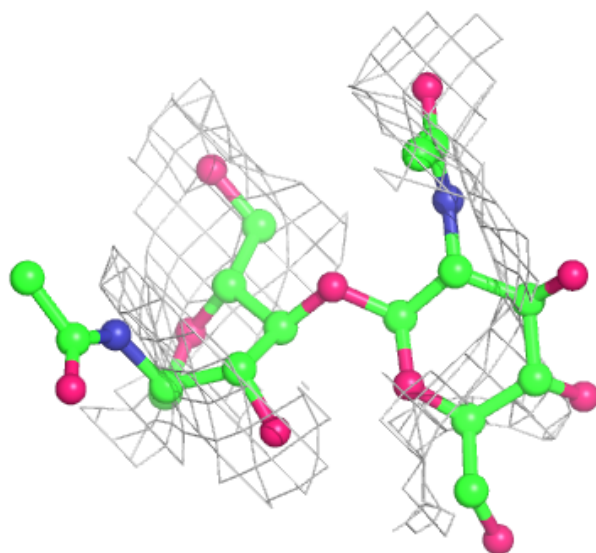
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
3	BMA	C	3	11/12	0.81	0.14	181,207,223,224	11
5	MAN	E	5	11/12	0.82	0.27	192,215,228,233	11
3	NAG	C	2	14/15	0.85	0.12	169,231,241,258	14
3	NAG	C	1	14/15	0.85	0.25	199,244,264,269	0
5	MAN	E	6	11/12	0.87	0.22	348,364,380,392	0
5	BMA	E	4	11/12	0.90	0.17	222,241,252,258	11
5	NAG	E	1	14/15	0.92	0.26	151,202,230,232	0
5	NAG	E	2	14/15	0.94	0.39	228,247,271,273	0

The following is a graphical depiction of the model fit to experimental electron density for oligosaccharide. Each fit is shown from different orientation to approximate a three-dimensional view.

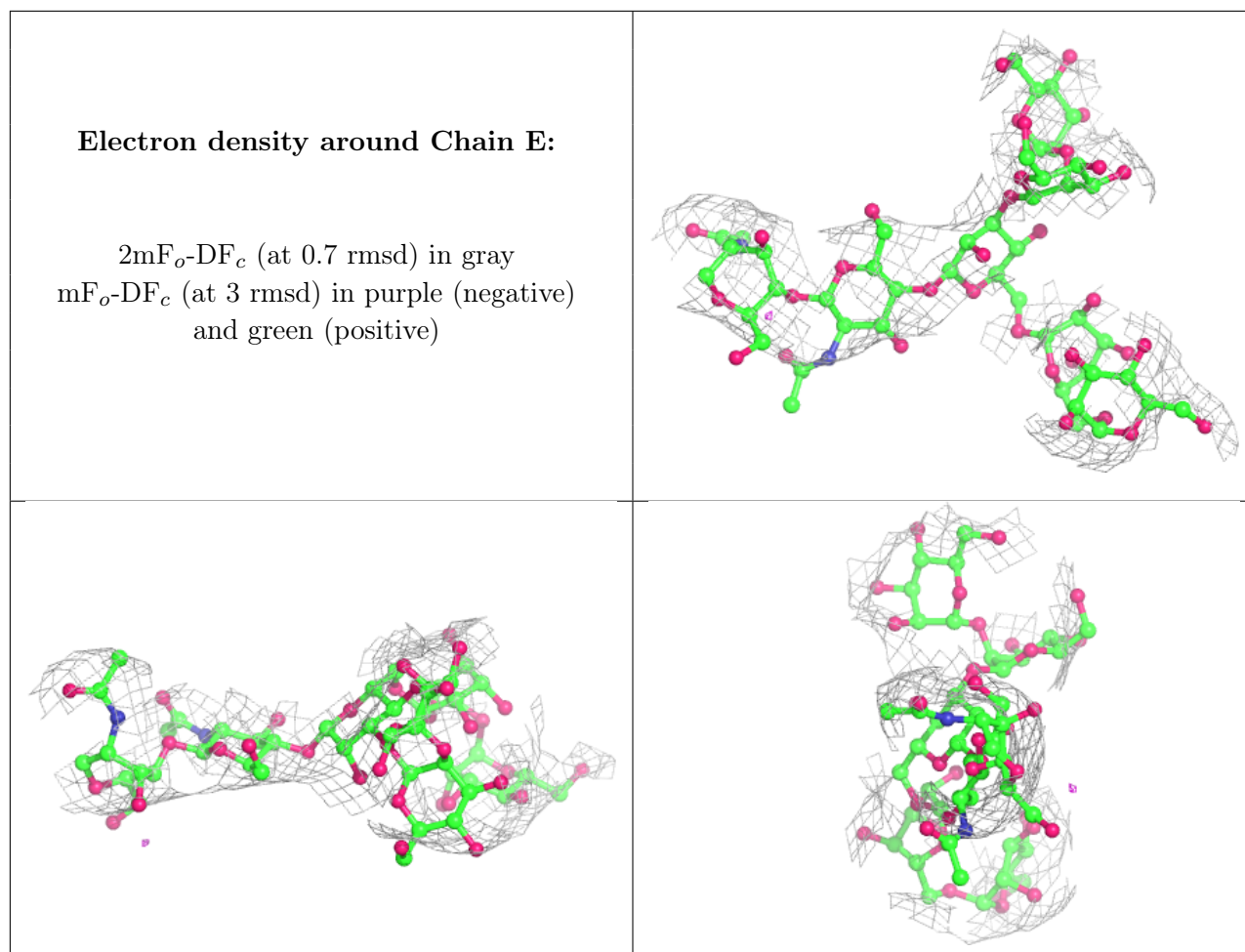


**Electron density around Chain D:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)







## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
6	CA	A	806	1/1	0.93	0.21	236,236,236,236	0
7	CU	A	808	1/1	0.98	0.11	167,167,167,167	0
6	CA	A	807	1/1	0.99	0.14	165,165,165,165	0
6	CA	A	805	1/1	0.99	0.14	215,215,215,215	0
7	CU	B	2610	1/1	0.99	0.12	150,150,150,150	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.